
DRAFT ENVIRONMENTAL IMPACT ASSESSMENT & ENVIRONMENT MANAGEMENT PLAN

” B1” CATEGORY – MINOR MINERAL – CLUSTER – NON-FOREST LAND-PATTA
LAND-EXISTING

KOTHAPETTA ROUGH STONE CLUSTER QUARRIES

At

Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu State

For Obtaining

Environmental Clearance under EIA Notification – 2006
Schedule Sl. No. 1 (a) (i): Mining Project

IN CLUSTER OVER AN EXTENT OF 16.44.9 Ha

NAME OF PROPOSED PROJECT PROPONENTS APPLYING IN CLUSTER

Code	Proponent Name	Extent (Ha)
P1	M/s. Sri Devaraajaa M. Sand	4.00.0
P2	Tmt.K.M. Vijaya	4.00.0
P3	M/s. A.M. Quality Stone	4.74.9

Compiled as per Tor Obtained Vide

Lr No. SEIAA-TN/F.No.10244/2023/SEAC/ToR- 1681/2024 Dated:14.02.2024- P1

Lr No. SEIAA-TN/F.No.10248/SEAC/ToR-1676/2024 Dated:14.02.2024-P2

ToR Identification No: TO23B0108TN5558418N dated 13.03.2024 -P3

<p>Environmental Consultant GEO EXPLORATION AND MINING SOLUTIONS  Old No. 260-B, New No. 17, Advaitha Ashram Road, Alagapuram, Salem – 636 004, Tamil Nadu, India Accredited for sector 1 Cat ‘A’, sector 31 & 38 Cat ‘B’ Certificate No : NABET/EIA/2225/RA 0276 Phone: 0427-2431989, Email: ifthiahmed@gmail.com, geothangam@gmail.com Web: www.gemssalem.com</p>  	<p>Laboratory EHS 360 LABS PRIVATE LIMITED, 10/2 Ground floor, 50th street, 7th Avenue, Ashok Nagar, Chennai – 600 083.</p>
<p>Baseline Monitoring Period Oct 2023-Dec 2023</p>	
<p>MARCH 2024</p>	

For the easy representation the Proposed, Existing and abandoned Quarries are designated as below

PROPOSED QUARRIES

CODE	Name of the Proponent and Address	S.F. Nos, Village & Taluk	Extent in Ha	G.O. No & Date	Status
P-1	M/s. Devaraajaa M. Sand (Partnership firm)	78/1A(P), 78/1B(P) of Kothapetta Village, Krishnagiri Taluk	4.00.0	Roc.418/2018/Mines dated: 30.05.2018	Lr No. SEIAA- TN/F.No.10244/2023/SEAC/ToR- 1681/2024 Dated:14.02.2024
P-2	Tmt.K.M. Vijaya W/o.D.Mathiazhagan	78/1B (P), of Kothapetta Village, Krishnagiri Taluk	4.00.0	Roc.419/2017/Mines dated: 30.05.2018	Lr No. SEIAA- TN/F.No.10248/SEAC/ToR- 1676/2024 Dated:14.02.2024.
P-3	M/s. A.M. Quality Stone (Kowshik dev – Managing Partner	87/1B1B & 87/1B2B, Kothapetta Village, Krishnagiri Taluk,	4.74.9	Roc.1314/2023/M dated: 10.11.2023	ToR Identification No TO23B0108TN5558418N dated 13.03.2024
		Total	12.74.90Ha		

EXISTING QUARRY

CODE	Name of the Proponent and Address	S.F. Nos, Village & Taluk	Extent in Ha	G.O. No & Date	Lease Period
E-1	M/S. Ma Quality Stone	87/1B2(P), Kothapetta Village, Krishnagiri Taluk	3.70.0	Roc.1179/2020/Mines dated: 23.11.2022	23.11.2022 to 22.11.2032
		Total	3.70.0Ha		

NIL

ABANDONED/EXPIRED QUARRIES

CODE	Name of the Proponent and Address	S.F. Nos, Village & Taluk	Extent in Ha	G.O. No & Date	Lease Period
A-1	Thiru.Ganesan	56/1(P-D) Kothapetta Village, Krishnagiri Taluk	2.54.0	Roc.611/2009/Mines dated: 14.05.2015	14.05.2015 to 13.05.2020
A-2	Tmt.Sa.Sumitha Shankar	56/1 (P-5) Kothapetta Village, Krishnagiri Taluk	1.20.0	Roc.49/2016/Mines dated: 18.08.2016	1.09.2016 to 31.08.2021
A-3	Thiru.A. Madesh	56/1(P-C) Kothapetta Village, Krishnagiri Taluk	3.06.0	Roc.126/2010/Mines dated: 27.10.2009	03.05.2010 to 02.05.2015
		Total	6.80.0Ha		
TOTAL CLUSTER EXTENT			16.44.9 Ha		

Note: -

- Cluster area is calculated as per MoEF & CC Notification – S.O. 2269 (E) Dated: 01.07.2016

As per above notification S.O.2269(E) dated : 01.07.2016 in para (b) in Appendix XI,- (ii)(5): The lease not operative for three years or more and leases which have got environmental clearance as on 15th January, 2016 shall not be counted for calculating the area of cluster, but shall be included in the Environment Management Plan and the Regional Environmental Management Plan”

TERMS OF REFERENCE (ToR) COMPLIANCE

M/s. Sri Devaraajaa 'M' Sand -P1

ToR Obtained vide Lr No. SEIAA-TN/F.No.10244/2023/SEAC/ToR- 1681/2024 Dated:14.02.2024

SPECIFIC CONDITIONS		
Sl. No.	ToR Condition	Reply
1	The PP shall submit the 'Action Plan' on the issues raised during the Public Hearing with budgetary provisions for the same.	Noted and agreed
2	The PP shall submit the Comprehensive EIA with detailed mitigation measures including the controlled blasting measures for reducing the impacts due to the blasting operation air pollution and water pollution, etc on the surrounding structures existing within 1 km of the proposed quarry.	Chapter-4 detailed mitigation measures including Blasting, water, Air, etc.,
3	The PP shall exhibit the action plan for carrying out the quarrying activities systematically and scientifically keeping the structures belonging to the owner that exist within 300 m distance.	Noted and agreed
4	The PP shall submit a 'Conceptual Mining Plan' indicating the accessible ramp from the surface to the pit bottom keeping the benches intact for the dimension as stipulated in the Approved Mining Plan	Submit annexure Scheme of approved mining plan and approved mining plan.
5	The PP shall submit the nature of buildings/structures, occupants, and their profession, etc located within 500m radius of the proposed quarry	Chapter-3 Socioeconomic environment including 300m and 500m radius structure map with details.
6	The project proponent shall furnish Certified Compliance Report (CCR) obtained from IRO(SZ), MoEF&CC and with mitigation measures along with the budgetary allocation for the non-compliance stated therein.	Proponent obtained Certified Compliance report from the MoEF & CC, Regional Office, Chennai vide F.No EP/12.1.2023-24/SEIAA/65/TN/967 dated 09.08.2023 Proponent has carried out Mitigation measures for the Non compliances addressed in the CCR and ensure the remaining activities will be completed after Starting the mining Operation.
7	The proponent is requested to carry out a survey and enumerate on the structures located within the radius i)50m ii)100m iii)200m and iv)500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, place of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building number of residents, their profession and income, etc.,	Chapter-3 Socio economic environment details in structure map 300m Radius with table.
8	The PP shall furnish the ownership details of the physical structures located near the proposed mine lease area, number of workers, time period of working etc	Tmt.K.M. Vijaya, 4.00Ha, 21 nos of workers M/s. A.M. Quality Stone, 4.74.90Ha, 18 nos of workers 300days per year
9	If the existing depth of quarry has already reached 30 m, for the safety of the persons employed in the quarry, the PP shall carry out the scientific studies and to furnish the report with assessing the slope stability of the working benches and existing quarry walls for evaluating the slope stabilization & protective measures while designing the proposed benches, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining &	Existing quarry Existing Pit Dimension 210m(L) x 97m (W) x20m(D) (Avg) Preparing for EIA NABET/QCI consultation.

	Fuel Research / Dhanbad, NIRM/Bangalore, Division of Geotechnical Engineering-IITMadras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus. A copy of such scientific study report shall be submitted to the SEIAA, MoEF, TNPCB, AD/Mines-DGM and DMS, Chennai as a part of Environmental Compliance without any deviation.			
Annexure-1				
1	In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following	Yes. Existing quarry		
	i. Original pit dimension of the existing quarry	Existing Pit Dimension = 210m(L) x 97m (W) x20m(D) (Avg)		
	ii. Quantity achieved vs EC approved quantity	Quantity achieved = 4,06,000 for five years EC Quantity: 10,25,995m ³ Depth 71m (25m agl & 46m Bgl) period of 5 years		
	iii. Balance quantity as per Mineable Reserve calculated	Operated Without EC and reserve estimation carried out after deducting excavated quantum as below – <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Available Mineable Reserves of Rough Stone (Volume)</td> <td>5,13,365 m³</td> </tr> </table>	Available Mineable Reserves of Rough Stone (Volume)	5,13,365 m ³
Available Mineable Reserves of Rough Stone (Volume)	5,13,365 m ³			
	iv. Mined out Depth as on date vs EC permitted depth	Mined out depth is 20m, Operate EC Permit Depth 71m (25m agl & 46m Bgl) period of 5 years		
	v. Details of illegal/Illicit Mining carried out, if any	Non Illegal		
	vi. Non-Compliance / violation in the quarry during the past working	Non violence		
	vii. Quantity of material mine out outside the mine lease area (or) in the adjacent quarry/field	NO		
	viii. condition of safety / benches	Addressed in the Mining Plan by providing adequate safety and making bench formations.		
	ix. Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m.	287m (L) X 121m (W) X 41m (D)		
2	Details of habitations around the proposed mining area and latest VAO certificate regarding the location of habitations within 300m radius from the periphery of the site.	The letter detailing habitations around the proposed mining is obtained from Kothapetta Village Administrative Office vide Letter Nil Dated: 04.11.2022 and enclosed as Annexure – 3		
3	The proponent is requested to carry out a survey and enumerate on the structures located within the radius i)50m ii)100m iii)200m and iv)500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, place of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building number of residents, their profession and income, etc.,	Chapter-3 Socio economic environment details in structure map 300m Radius with table.		
4	The PP shall submit a detailed hydrological report indicating the impact of proposed quarrying operations on the waterbodies like lake, water tanks, etc are located within 1km of the proposed quarry.	The hydro-geological study was conducted to evaluate the possible impact on the ground water table. No significant impacts are anticipated on the water bodies around the project area. Details are discussed under Chapter No. 4		
5	The proponent shall carry out Bio diversity study through reputed institution and the same shall be included in EIA Report.	The Bio diversity study has been conducted by the Functional Area Expert approved by the NABET. The same has been detailed in the Chapter No.3		
6	The DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., up to a radius of 25 km from the proposed site.	Request to consider the secondary source data detailing the nearest reserve forest from Tamil Nadu Geographical Information System (TNGIS).		

		The Nearest Reserve Forest is Peddathalapalli R.F – 3.46km – South East
7	In the case of proposed lease in an existing (or old) quarry where the benches are not formed (or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall the PP shall carry out the scientific studies to assess the slope stability of the working benches to be constructed and existing quarry wall, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRI/Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus" The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining the EC.	The applied area has an Existing Pit Dimension 210m(L) x 97m (W) x20m(D) (Avg). This was operated without Prior Environmental Clearance. Now, the Mining Plan is prepared considering the bench formation and working safety parameters and approve by Department of Geology & Mining.
8	However, in case of the fresh/virgin quarries, the Proponent shall submit a conceptual 'Slope Stability Plan' for the proposed quarry during the appraisal while obtaining the EC, when the depth of the working is extended beyond 30 m below ground level.	It is an Existing quarry EC depth is 71m Proposal depth is 41m
9	The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/I Class mines manager appointed by the proponent.	The PP affirms that post execution of Quarry Lease Deed the application for Notice of Opening of the Mine along with Notice of Appointment of Competent Person shall be submitted to Director General Mines Safety, Chennai as per MMR, 1961. And ensure the quarry is operated under the Competent Person Employed.
10	The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site.	The details of design for carrying out controlled blasting operation involving line drilling and muffle blasting to minimize blast-induced ground vibrations and controlled fly rock travel beyond 30 m from the blast site is detailed in Chapter 4.
11	The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidences.	The PP has submitted self-declaration affidavit that there are no other quarries applied or existing in his name elsewhere in the state.
12	If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD mines,	Yes. DEIAA – KGI Lr No 35/DEIAA-KGI/Ec.No. 27/2018 Dated 27.02.2018
13	What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?	This is an Existing quarry
14	Quantity of minerals mined out.	This is an Existing quarry
	c) Highest production achieved in any one year	1,14,000 (2019-2020)
	d) Detail of approved depth of mining.	EC Depth 71m
	e) Actual depth of the mining achieved earlier.	Depth 20m
	f) Name of the person already mined in that leases area.	M/s. Sri Devaraajaa 'M' Sand (Thiru. D.Mathiazhagan-Managing Partner)
	g) If EC and CTO already obtained, the copy of the same shall be submitted.	EC: DEIAA – KGI Lr No 35/DEIAA-KGI/Ec.No. 27/2018 Dated 27.02.2018

		CTO: F.1682HSR/RS/DEE/TNPCB/HSR/A/2022 Dated: 22.08.2022
	h) Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.	EC depth is 71m, but actual depth is 20m.
15	All corner coordinates of the mine lease area, superimposed on a high-resolution Imagery/Toposheet, Geomorphology, Lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and Buffer zone area).	Satellite imagery of the project area along with boundary coordinates is given in the Chapter No 2,
16	The PP shall carry out Drone video survey covering the cluster, green belt, fencing etc.,	The Drone Video of the project site is taken covering the Greenbelt and Fencing around the Project and enclosed as soft copy as CD.
17	The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.	As per the recommendations during SEAC ToR Presentation of the proposal and commitment of PP a count of 2000 Nos of trees were planted as a part of greenbelt development programme all along the periphery of the lease applied area and approach roads and village roads. As well the pp has provided wire fencing as recommended all along the boundary of the lease applied area.
18	The Project proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology justifications, with the anticipated impacts of the mining operations on the surrounding environment and the remedial measures for the same.	Details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology justifications are provided in Chapter 2. The anticipated impacts of the mining operations on the surrounding environment and the remedial measures for the same are provided in Chapter 4.
19	The Project proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of Mines Act, 1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.	The Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of Mines Act, 1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.
20	The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers' tanks, canals, ponds etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitored data' it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be Provided.	The hydro-geological study was conducted to evaluate the possible impact on the ground water table. No significant impacts are anticipated on the water bodies around the project area. Details are discussed under Chapter No. 3.
21	The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quantity, air quality, soil quality & flora/fauna including Traffic/vehicular movement study.	Baseline Data were collected for (Post Monsoon) Oct 2023 to Dec 2023. Details in Chapter No. 3. baseline data for the environment.
22	The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of soil, health, biodiversity, air	Cumulative impact study has been carried out covering proposed and existing quarries in the cluster and results related to air pollution, water pollution, & health impacts have been given in chapter No.7, Based on the results,

	pollution, water pollution, climate change and flood control & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.	environmental management plan has been prepared and given in Chapter No. 10.
23	Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.	The lower part of the mine pit will be utilized as rain water harvesting structure (Temporary) and the water will be used for the water sprinkling on haul roads and Greenbelt development purpose. Rainwater harvesting structure will be constructed near the mine office.
24	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass pre operational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.	Land use and land cover of the study area is discussed in Chapter No. 3. Land use plan of the project area showing pre-operational, operational and post-operational phases are discussed in Chapter No. 3, Table No 3.3
25	Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be provided.	Not applicable
26	Proximity to Areas declared as 'Critically Polluted' (or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered.	Not Applicable. Project area / Study area is not declared in 'Critically Polluted' Area and does not come under 'Aravalli Range.
27	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.	The lower part of the mine pit will be utilized as rain water harvesting structure (Temporary) and the water will be used for the water sprinkling on haul roads and Greenbelt development purpose. Rainwater harvesting structure will be constructed near the mine office.
28	Impact on local transport infrastructure due to the Project should be indicated.	Traffic density survey was carried out to analyze the impact of transportation in the study area as per IRC guidelines 1961 and it is inferred that there is no significant impact due to the proposed transportation from the project area. Details have been provided in Chapter No.2
29	A tree survey study shall be carried out (nos., name of the species, age, diameter etc.) both within the mining lease applied area & 300m buffer zone and its management during mining activity.	As per the recommendations during SEAC ToR Presentation of the proposal and commitment of PP a count of 2000Nos of trees were planted as a part of greenbelt development programme all along the periphery of the lease applied area and approach roads and village roads.
30	A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.	Noted & agreed. Mine closure plan is detailed in Chapter:4.
31	As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study, wherever possible.	Noted, the EB study has been conducted covering the local students and importance of flora and fauna was explained.
32	The purpose of green belt around the project is to capture the fugitive emissions. Carbon sequestration	As per the recommendations during SEAC ToR Presentation of the proposal and commitment of PP a

	and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix in consultation with the DFO, State Agriculture University. The plant species with dense/moderate canopy of native origin should be chosen. Species of Small medium/tall trees alternating with shrubs should be planted in a mixed manner.	count of 2000 Nos of trees were planted as a part of greenbelt development programme all along the periphery of the lease applied area and approach roads and village roads.
33	Taller/one year old Saplings raised in appropriate size of bags; preferably eco-friendly bags should be planted as per the advice of local forest authorities / botanist / Horticulturist with regard to site specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner.	As per the recommendations during SEAC ToR Presentation of the proposal and commitment of PP a count of 2000 Nos of trees were planted as a part of greenbelt development programme all along the periphery of the lease applied area and approach roads and village roads.
34	A Disaster management Plan shall be prepared and included in the EIA/EMP Report.	Disaster management Plan is detailed in Chapter-7
35	A Risk Assessment and management Plan shall be prepared and included in the EIA/EMP Report.	A Risk Assessment and management Plan Chapter- 7
36	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.	Occupational Health impacts are discussed in chapter- 10
37	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.	No Public Health Implications anticipated due to this project. Details of CER and CSR are discussed under Chapter 8.
38	The Socio-economic studies should be carried out within a 5 km buffer zone from the mining activity. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.	Details are listed in Chapter:3.
39	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.	No Litigation is pending
40	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.	Project benefit is given in the Chapter No.8.
41	If any quarrying operations were carried out in the proposed quarrying site for which now the EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF & CC, Regional Office, Chennai (or) the concerned DEE/TNPCB.	Not Applicable. The applied area is a new proposal for Environmental Clearance.
42	The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.	Noted and agreed

43	Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Reference besides attracting penal provisions in the Environment (Protection) Act, 1986.	Noted and agreed
NORMAL CONDITIONS- Annexure-B		
<i>Cluster Management committee</i>		
1.	Cluster Management Committee shall be framed which must include all the proponents in the cluster as members including the existing as well as proposed quarry.	Cluster Management Committee has been constituted initially with 2quarry
2	The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc..	The information will be shared to the cluster management committee during the monthly meeting.
3	The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.	The list of members of the committee formed will be submitted to AD/Mines before the execution of mining lease.
4	Detailed operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.	All the information has been discussed in Chapter No.2
5	The committee shall deliberate on risk management plan pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan	The risk management plan and disaster management plan will be followed as per this EIA report.
6	The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the environmental policy devised shall be given in detail.	Environmental policy is described in the EIA report Chapter No. 6 and the same will be followed.
7	The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.	A proper action plan regarding the restoration will be followed by the committee
8	The committee shall furnish the Emergency Management plan within the cluster.	The committee will submit the emergency management plan to the respective authority in the stipulated time period.
9	The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public.	The risk management plan and disaster management plan will be followed as per the EIA report.
10	The committee shall furnish an action plan to achieve sustainable development goals with reference to water, sanitation & safety.	A proper action plan with reference to water, sanitation & safety will be devised and submitted by the committee to the respective authority.
11	The committee shall furnish the fire safety and evacuation plan in the case of fire accidents.	The fire safety and evacuation plan will be carried out by as per the respective quarry mines managers
<i>Impact study of mining</i>		
12	Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area covering the entire mine lease period as per precise	Details of Soil health is given in Chapter No 3 and biodiversity is given in Chapter No 3. The project will not cause any significant changes in the climate

	<p>area communication order issued from reputed research institutions on the following</p> <p>a) Soil health & bio-diversity, physical land chemical features.</p> <p>b) Climate change leading to Droughts, Floods etc.</p> <p>c) Pollution leading to release of Greenhouse gases (GHG), rise in 'Temperature' & 'Livelihood of the local people.'</p> <p>d) Possibilities of water contamination and impact on aquatic ecosystem health'</p> <p>e) Agriculture, Forestry & Traditional practices.</p> <p>1) Hydrothermal/Geothermal effect due to destruction in the Environment'</p> <p>g) Bio-geochemical processes and its foot prints including environmental stress'</p> <p>h) Sediment geochemistry in the surface steams.</p>	<p>Climatic changes and GHG are described in Chapter No 4.</p> <p>Details of water contamination and impact on aquatic ecosystem is given in Chapter No 4.</p> <p>Hydrothermal/ Geothermal effects due to destruction in the environment, Bio geochemical process and sediment geo chemistry given in the Chapter No 7.</p>
<i>Agriculture & Agro-Biodiversity</i>		
13	Impact on surrounding agricultural fields around the proposed mining Area.	As the proposed lease area is dominantly surrounded by mining land, barren land, and fallow land, the impact on the surrounding agricultural fields if present will be low. With proper mitigation measures, the project will be carried out to reduce the impact further to the level of negligence.
14	Impact on soil flora & vegetation around the project site.	The vegetation details have been provided in chapter III. There is no schedule I species of animals observed within study area as per Wildlife Protection Act, 1972 and no species falls in vulnerable, endangered or threatened category as per IUCN. There is no endangered red list species found in the study area.
15	Details of type of vegetations including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetations all along the boundary of the proposed mining area shall committed mentioned in EMP.	The vegetation details have been provided in chapter III. There is no schedule I species of animals observed within study area as per Wildlife Protection Act, 1972 and no species falls in vulnerable, endangered or threatened category as per IUCN. There is no endangered red list species found in the study area
16	The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the soil micro flora. fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.	Details are discussed in Chapter No.3
17	Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.	The Eco System of the area will be retained during the mining operation by the way of planting trees in the boundary barrier and un utilized areas. After completion of mining operation, the quarried-out pit will be facilitated to collect the rainwater to pit act as temporary reservoir
18	The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands. Horticulture, Agriculture and livestock.	The project area is bounded by dry barren land on all the sides.
<i>Forest</i>		
19	The project proponent shall detail study on impact of mining on Reserve forests free ranging wildlife.	There is no Reserve Forest within 1km radius from the project area (Peddathalapalli R.F-2.30km-SW. The mining operation will not cause any significant impact to the Reserve Forest and Wild life Sanctuaries.
20	The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.	There is no forest/wildlife within 10km radius, chapter 3 details of Ecology and Biodiversity, and 4 endemic vulnerable and endangered indigenous flora and fauna.

21	The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.	Inside trees 840, outside trees 1560 detailed in greenbelt plan chapter-4 and 10.
22	The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.	Anticipated Environment Impact and Mitigation measures are detailed in Chapter No.4
Water Environment		
23	Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period.	Hydro-geological study considering the contour map of the water table detailing Chapter-3
24	Erosion Control measures.	Garland drainage structures will be constructed around the lease area to control the erosion, as discussed in Section 4.3 under Chapter 4.
25	Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby villages, water-bodies/ Rivers. & any ecological fragile areas.	In the EIA report Chapter No. IV enumerate the anticipated impact due to the project and mitigation measures
26	The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.	Detailed under Chapter 3.
27	The project proponent shall study and furnish the details on potential fragmentation impact on natural environment by the activities.	Details are given in the Chapter No 4.
28	The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts.	Detailed discussed in the chapter 4
29	The Terms of Reference should specifically study impact on soil health, soil erosion, the soil, physical, chemical components and microbial components.	There is no topsoil in the proposed area. Details of impact on soil environment is detailed in Chapter No.4.
30	The Environmental impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.	The nearest water bodies from the project area are an Odai located 120m – NE
Energy		
31	The measures taken to control Noise. Air, Water. Dust Control and steps adopted to efficiently utilize the Energy shall be furnished.	Details in Chapter 3 environmental monitoring details.
Climate Change		
32	The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities.	Details of carbon emission and mitigation activities are given in the Chapter No.4
33	The Environmental impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock.	The project will not cause significant impact on climatic change. Description about the project and climatic changes is described in Chapter No.4.
Mine Closure Plan		

34	Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.	Details in Chapter 2 mine closure plan
EMP		
35	Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued.	Details in EMP in chapter 10
36	The Environmental Impact Assessment should hold detailed study on EMP with budget for green belt development and mine closure plan including disaster management plan.	Detailed Environment Management Plan for the project to mitigate the anticipated impacts described under Chapter 4 is discussed under Chapter 10.
Disaster Management Plan		
38	To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid/reduce vulnerability to hazards & to cope with disaster/untoward accidents in & around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued.	Disaster management Plan details in Chapter-7
Others		
39	The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations. schools. Archaeological sites. Structures. railway lines, roads. Water bodies such as streams, odai, vaari, canal, channel. river, lake pond, tank etc.	The letter detailing habitations around the proposed mining is obtained from Kothapetta Village Administrative Office vide Letter Nil Dated: 08.02.2023 and enclosed as Annexure – 3
40	As per the MoEF & CC office memorandum tr.No.22-65I201 7-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.	Noted and agreed
41	The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment. The ecological risks and impacts of plastic & microplastics on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.	Details of plastic management is in chapter 7

TERMS OF REFERENCE (ToR) COMPLIANCE

Tmt.K.M. Vijaya -P2

ToR Obtained vide Lr No. SEIAA-TN/F.No.10248/SEAC/ToR-1676/2024 Dated:14.02.2024

SPECIFIC CONDITIONS		
Sl. No.	ToR Condition	Reply
1	The proponent is requested to carry out a survey and enumerate on the structures located within the radius i)50m ii)100m iii)200m and iv)500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, place of worship, industries, factories, sheds, etc with indicating the owner of the building, nature	Chapter-3 Socio economic environment details in structure map 300m Radius with table.

	of construction, age of the building number of residents, their profession and income, etc.,	
2	The PP shall furnish the ownership details of the physical structures located near the proposed mine lease area, number of workers, time period of working etc	Noted and agreed
3	If the existing depth of quarry has already reached 30 m, for the safety of the persons employed in the quarry, the PP shall carry out the scientific studies and to furnish the report with assessing the slope stability of the working benches and existing quarry walls for evaluating the slope stabilization & protective measures while designing the proposed benches, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRM/Bangalore, Division of Geotechnical Engineering-IITMadras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus. A copy of such scientific study report shall be submitted to the SEIAA, MoEF, TNPCB, AD/Mines-DGM and DMS, Chennai as a part of Environmental Compliance without any deviation.	Existing quarry EC approval Depth 71m
4	The project proponent shall furnish Certified Compliance Report (CCR) obtained from IRO(SZ), MoEF&CC and with mitigation measures along with the budgetary allocation for the non-compliance stated therein.	Proponent obtained Certified Compliance report from the MoEF & CC, Regional Office, Chennai vide F.1682HSR/RS/DEE/TNPCB/HSR/A/2022 Dated: 22.08.2022. Proponent has carried out Mitigation measures for the Non compliances addressed in the CCR and ensure the remaining activities will be completed after Starting the mining Operation.
5	The Project Proponent shall furnish the revised EMP based on the study carried out on impact of the dust & other environmental impacts due to proposed quarrying operations on the nearby agricultural lands for remaining life of the mine in the format prescribed by the SEAC considering the cluster situation.	The Revised EMP has been incorporated in the Chapter No. X
6	The PP shall prepare a conceptual working plan accommodating the remedial actions such as inclusion of haul road accessibility keeping the benches intact, based on the studies carried out to assess the slope stability of the working benches to be constructed and existing quarry wall. The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and slope stability action plan during the time of appraisal for obtaining the EC.	Noted and agreed
7	The PP shall undertake Hydrogeology study considering nearby existing wells, Aquifers, Ground water & surface water levels etc within the radius of 1km.	The hydro-geological study was conducted to evaluate the possible impact on the ground water table. No significant impacts are anticipated on the water bodies around the project area. Details are discussed under Chapter No. 4 Chapter-3 details in water environment

Annexure-1		
1	The PP shall furnish the letter obtained from the AD (Mines) indicating the existing pit dimensions and pit conditions showing the details on mine having worked during the earlier lease period.	Noted and agreed
2	The PP shall furnish DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., up to a radius of 25 km from the proposed site.	Noted, it will submit final EIA
3	The PP shall provide individual notice regarding the Public Hearing to the nearby house owners located in the vicinity of the project site.	Noted and agreed
4	The Proponent shall justify the selection of the site for carrying out the stone quarrying with the total volume arrived for the excavation & production adequate details such as lithology of the deposit, reserve estimation, place for waste dump/mined mineral storage, end-use of mined materials, identified potential customers/end-users and travel path.	Rough Stone quarry (Volume) 9,68,575m ³ Production of Rough Stone quarry (Scheme of Mining plan period) Volume 7,93,205m ³
5	The PP shall also justify the selection of mining methodology (conventional or nonconventional) adopting blasting techniques/non-explosive techniques with proper ground reality & laboratory testing.	Noted and agreed
6	The proponent shall submit the "Blast Design Parameters for controlling the vibration and fly rock from the quarry blasting" considering the existence of sensitive structures including habitations within 500 m from the lease boundary.	Noted and agreed
7	The PP shall justify the estimation of HEMM population for excavation and transportation in the proposed quarries with proper calculation methodology adopted.	Chapter- 2 Transport density and calculation of truck load.
8	The PP shall enumerate the environmental settings situated within a radial distance of 1km such rivers/water bodies/reserve forests/ grazing land /existence of the hospitals and educational institutions/structures.	Details in Chapter-3 Environment settings with 1km radius landuse map
9	The PP shall provide the details of the anticipated impacts of the mining operations on the surrounding environment and the remedial measures for the same.	Details in chapter-4 anticipated impacts of the mining operations
10	The proponent is requested to carry out a survey and enumerate on the structures located within the radius i)50m ii)100m iii)200m and iv)500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, place of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building number of residents, their profession and income, etc.,	Chapter-3 Socio economic environment details in structure map 300m Radius with table.
11	The PP shall submit a 'Slope Stability Action Plan' for the proposed quarry where the proposed depth exceeds 30 m and it shall cover the aspects of stability of quarry walls including the access ramp keeping the benches intact.	Existing quarry Proposed depth 31m (1m Gravel +30m Rough stone)

12	If the blasting operation is to be carried out, the PP shall present a conceptual design for carrying out the NONEL initiation based controlled blasting operation including the line drilling & muffle blasting techniques and a Simulation Model indicating the anticipated Blast induced Ground vibration levels in the proposed quarry as stipulated by the DGMS circular No.7 of 1997, during the EIA Proposal.	Details in chapter-4 sub-4.4.3.1 Common Mitigation Measures for carrying out the NONEL initiation based controlled blasting method.
13	The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/I Class mines manager appointed by the proponent.	The PP affirms that post execution of Quarry Lease Deed the application for Notice of Opening of the Mine along with Notice of Appointment of Competent Person shall be submitted to Director General Mines Safety, Chennai as per MMR, 1961. And ensure the quarry is operated under the Competent Person Employed.
14	The PP shall give an affidavit stating that no contractual persons provided by the explosive suppliers will be employed for carrying out the blasting operations in the proposed quarries.	This is an Existing quarry
15	The PP shall also give an affidavit that no highly sensitive structure such as fire-cracker manufacturing units, Gas godown/explosive Magazine, LPG Bottling Units, etc are located within a radial distance of 300 m from the lease boundary of the proposed quarry.	Noted and agreed
16	The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 20 m from the blast site.	The details of design for carrying out controlled blasting operation involving line drilling and muffle blasting to minimize blast-induced ground vibrations and controlled fly rock travel beyond 30 m from the blast site is detailed in Chapter 4.
17	The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidences.	The PP has submitted self-declaration affidavit that there are no other quarries applied or existing in his name elsewhere in the state.
18	The PP shall provide the environmental mitigation measures implemented for the crusher(s) located within the mining lease.	Details in environmental mitigation Chapter-4
19	If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD mines, <ul style="list-style-type: none"> a) What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines b) Quantity of minerals mined out. c) Highest production achieved in any one year d) Detail of approved depth of mining. e) Actual depth of the mining achieved earlier. f) Name of the person already mined in that leases area. g) If EC and CTO already obtained, the copy of the same shall be submitted. h) Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches. 	<ul style="list-style-type: none"> a) Existing quarry b) Quantity of minerals is 1,06,000 m³ for five years. c) Highest Production 28,000m³ (2020-2021) d) EC Approved Depth of mining 71m e) 12m Depth f) Tmt.K.M.Vijaya g) EC: DEIAA – KGI Letter No. 34/DEIAA-KGI/Ec.No. 26/2018 Dated 27.02.2018 CTO(Renewal): F.1682HSR/RS/DEE/TNPCB/HSR/A/2022 Dated: 22.08.2022 h) Actual depth is 12m, but EC approved depth is 71m.

20	If any quarrying operations were carried out in the proposed quarrying site for which now the EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF&CC, Regional Office, Chennai (or) the concerned DEE/TNPCCB.	This is an Existing quarry EC: DEIAA – KGI Letter No. 34/DEIAA-KGI/Ec.No. 26/2018 Dated 27.02.2018
21	All corner coordinates of the mine lease area, superimposed on a high-resolution Imagery/Toposheet, Geomorphology, Lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and Buffer zone area).	Satellite imagery of the project area along with boundary coordinates is given in the Chapter No 2, Figure No.2.1, 2.2. Page No. 8 & 10. Geomorphology of the area is given in Chapter No 2, Figure No.2.6, Page No. 20 Land use pattern of the project area is tabulated in the Chapter No.2. Table no 2.3, Page No. 17
22	The PP shall carry out Drone video survey covering the cluster, green belt, fencing etc.,	Noted and agreed
23	The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.	As per the recommendations during SEAC ToR Presentation of the proposal and commitment of PP a count of 2000 Nos of trees were planted as a part of greenbelt development programme all along the periphery of the lease applied area and approach roads and village roads. As well the pp has provided wire fencing as recommended all along the boundary of the lease applied area.
24	The Project proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of Mines Act, 1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.	The Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of Mines Act, 1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.
25	The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers' tanks, canals, ponds etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitored data' it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be Provided.	The hydro-geological study was conducted to evaluate the possible impact on the ground water table. No significant impacts are anticipated on the water bodies around the project area. Details are discussed under Chapter No. 3.
26	The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quantity, air quality, soil quality & flora/fauna including Traffic/vehicular movement study.	Baseline Data were collected for (Post Monsoon) Oct 2023 to Dec 2023. Details in Chapter No. 3.
27	The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of soil, health, biodiversity, air pollution, water pollution, climate change and flood control & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.	Cumulative impact study has been carried out covering proposed and existing quarries in the cluster and results related to air pollution, water pollution, & health impacts have been given in chapter No. 7, Pg. No 128 -123, Based on the results, environmental management plan has been prepared and given in Chapter No. 10. Pg. No 141.

28	Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.	The lower part of the mine pit will be utilized as rain water harvesting structure (Temporary) and the water will be used for the water sprinkling on haul roads and Greenbelt development purpose. Rainwater harvesting structure will be constructed near the mine office.
29	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass pre operational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.	Land use and land cover of the study area is discussed in Chapter No. 3. Land use plan of the project area showing pre-operational, operational and post-operational phases are discussed in Chapter No. 3, Table No 3.3, Page No. 39.
30	Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be provided.	Not applicable
31	Description of water conservation measures proposed to be adopted in the project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.	The lower part of the mine pit will be utilized as rain water harvesting structure (Temporary) and the water will be used for the water sprinkling on haul roads and Greenbelt development purpose. Rainwater harvesting structure will be constructed near the mine office.
32	If the Village Road/State highway/National highway are located within a radial distance of 500 m from the lease boundary of the quarry proposal, the PP shall carry out traffic studies to indicate impact on local transport infrastructure due to the Project and mitigation measures.	Traffic density survey was carried out to analyse the impact of Transportation in the study area as per IRC guidelines 1961 and it is inferred that there is no significant impact due to the proposed transportation from the project area. Details in Chapter 2.
33	A tree survey study shall be carried out (nos., name of the species, age, diameter etc.,) both within the mining lease applied area & 300m buffer zone and its management during mining activity.	There are no trees present in the target mining area. As per the recommendations during SEAC ToR Presentation of the proposal and commitment of PP a count of 2000Nos of trees were planted as a part of greenbelt development programme all along the periphery of the lease applied area and approach roads and village roads.
34	A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.	Noted & agreed. Mine closure plan is detailed in Chapter:4.
35	Public Hearing points raised and commitments of the Project Proponent on the same along with time bound Action plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the project and to be submitted to SEIAA/SEAC with regard to the office Memorandum of MoEF& CC accordingly.	Noted & agreed.
36	The Public hearing advertisement shall be published in one major National daily and one most circulated vernacular daily.	Noted and agreed
37	The PP shall produce/dispray the EIA report, Executive summary and other related information with respect to public hearing in Tamil Language also.	Enclosed as separate booklet.
38	As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local students on the	It will be submit final EIA/EMP report.

	importance of preserving local flora and fauna by involving them in the study, wherever possible.	
39	The purpose of green belt around the project is to capture the fugitive emissions. Carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix in consultation with the DFO, State Agriculture University. The plant species with dense/moderate canopy of native origin should be chosen. Species of Small medium/tall trees alternating with shrubs should be planted in a mixed manner.	As per the recommendations during SEAC ToR Presentation of the proposal and commitment of PP a count of 2000Nos of trees were planted as a part of greenbelt development programme all along the periphery of the lease applied area and approach roads and village roads.
40	Taller/one year old Saplings raised in appropriate size of bags; preferably eco-friendly bags should be planted as per the advice of local forest authorities / botanist / Horticulturist with regard to site specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner.	As per the recommendations during SEAC ToR Presentation of the proposal and commitment of PP a count of 2000 Nos of trees were planted as a part of greenbelt development programme all along the periphery of the lease applied area and approach roads and village roads.
41	A Disaster management Plan shall be prepared and included in the EIA/EMP Report.	Disaster management Plan is detailed in Chapter-7
42	A Risk Assessment and management Plan shall be prepared and included in the EIA/EMP Report.	A Risk Assessment and management Plan Chapter-7
43	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.	Occupational Health impacts are discussed in chapter- 10
44	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.	No Public Health Implications anticipated due to this project. Details of CER and CSR are discussed under Chapter 8.
45	The Socio-economic studies should be carried out within a 5 km buffer zone from the mining activity. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.	Details are listed in Chapter:3. Socio-economic studies
46	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.	No Litigation is pending
47	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.	Project benefit is given in the Chapter No.8.
48	If any quarrying operations were carried out in the proposed quarrying site for which now the EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall	PreviousEC: F.1682HSR/RS/DEE/TNPCB/HSR/A/2022 Dated: 22.08.2022 It is an Existing Lease.

	duly be certified by MoEF & CC, Regional Office, Chennai (or) the concerned DEE/TNPCB.	
49	The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.	Noted and agreed
50	Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Reference besides attracting penal provisions in the Environment (Protection) Act, 1986.	Noted and agreed
NORMAL CONDITIONS- Annexure-B		
<i>Cluster Management committee</i>		
1.	Cluster Management Committee shall be framed which must include all the proponents in the cluster as members including the existing as well as proposed quarry.	Cluster Management Committee has been constituted initially with 2quarry.
2	The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc..	The information will be shared to the cluster management committee during the monthly meeting
3	The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.	The list of members of the committee formed will be submitted to AD/Mines before the execution of mining lease.
4	Detailed operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.	All the information has been discussed in Chapter No.2
5	The committee shall deliberate on risk management plan pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan	The risk management plan and disaster management plan will be followed as per this EIA report.
6	The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the environmental policy devised shall be given in detail.	Environmental policy is described in the EIA report Chapter No. 6 and the same will be followed.
7	The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.	A proper action plan regarding the restoration will be followed by the committee
8	The committee shall furnish the Emergency Management plan within the cluster.	The committee will submit the emergency management plan to the respective authority in the stipulated time period.
9	The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public.	The risk management plan and disaster management plan will be followed as per the EIA report.
10	The committee shall furnish an action plan to achieve sustainable development goals with reference to water, sanitation & safety.	A proper action plan with reference to water, sanitation & safety will be devised and submitted by the committee to the respective authority.

11	The committee shall furnish the fire safety and evacuation plan in the case of fire accidents.	The fire safety and evacuation plan will be carried out by as per the respective quarry mines managers
Impact study of mining		
12	Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area covering the entire mine lease period as per precise area communication order issued from reputed research institutions on the following a) Soil health & bio-diversity, physical land chemical features. b) Climate change leading to Droughts, Floods etc. c) Pollution leading to release of Greenhouse gases (GHG), rise in Temperature' & Livelihood of the local people. d) Possibilities of water contamination and impact on aquatic ecosystem health' e) Agriculture, Forestry & Traditional practices. 1) Hydrothermal/Geothermal effect due to destruction in the Environment' g) Bio-geochemical processes and its foot prints including environmental stress' h) Sediment geochemistry in the surface steams.	Details of Soil health is given in Chapter No 3 and biodiversity is given in Chapter No 3. The project will not cause any significant changes in the climate Climatic changes and GHG are described in Chapter No 4. Details of water contamination and impact on aquatic ecosystem is given in Chapter No 4. Hydrothermal/ Geothermal effects due to destruction in the environment, Bio geochemical process and sediment geo chemistry given in the Chapter No 7.
Agriculture & Agro-Biodiversity		
13	Impact on surrounding agricultural fields around the proposed mining Area.	As the proposed lease area is dominantly surrounded by mining land, barren land, and fallow land, the impact on the surrounding agricultural fields if present will be low. With proper mitigation measures, the project will be carried out to reduce the impact further to the level of negligence.
14	Impact on soil flora & vegetation around the project site.	The vegetation details have been provided in chapter III. There is no schedule I species of animals observed within study area as per Wildlife Protection Act, 1972 and no species falls in vulnerable, endangered or threatened category as per IUCN. There is no endangered red list species found in the study area.
15	Details of type of vegetations including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetations all along the boundary of the proposed mining area shall committed mentioned in EMP.	The vegetation details have been provided in chapter III. There is no schedule I species of animals observed within study area as per Wildlife Protection Act, 1972 and no species falls in vulnerable, endangered or threatened category as per IUCN. There is no endangered red list species found in the study area
16	The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the soil micro flora. fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.	Details are discussed in Chapter No.3
17	Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.	The Eco System of the area will be retained during the mining operation by the way of planting trees in the boundary barrier and un utilized areas. After completion of mining operation, the quarried-out pit will be facilitated to collect the rainwater to pit act as temporary reservoir

18	The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands. Horticulture, Agriculture and livestock.	The project area is bounded by dry barren land on all the sides.
Forest		
19	The project proponent shall detail study on impact of mining on Reserve forests free ranging wildlife.	There is no Reserve Forest within 1km radius from the project area (Peddathalapalli R.F –2.30km – South West. The mining operation will not cause any significant impact to the Reserve Forest and Wild life Sanctuaries.
20	The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.	There is no forest/wildlife within 10km radius, Chapter-3 details of Ecology and Biodiversity, and Chapter-4 endemic vulnerable and endangered indigenous flora and fauna.
21	The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.	Inside trees 630 and Outside trees 1770 trees in chapter-4 Greenbelt environment.
22	The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.	Anticipated Environment Impact and Mitigation measures are detailed in Chapter No.4
Water Environment		
23	Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks. canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period.	Hydro-geological study considering the contour map of the water table detailing Chapter-3
24	Erosion Control measures.	Garland drainage structures will be constructed around the lease area to control the erosion, as discussed in Section 4.3 under Chapter 4.
25	Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby villages, water-bodies/ Rivers. & Any ecological fragile areas.	In the EIA report Chapter No. IV enumerate the anticipated impact due to the project and mitigation measures
26	The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.	Detailed under Chapter 3.
27	The project proponent shall study and furnish the details on potential fragmentation impact on natural environment by the activities.	Details are given in the Chapter No 4.
28	The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts.	Detailed discussed in the chapter 4
29	The Terms of Reference should specifically study impact on soil health, soil erosion, the soil, physical, chemical components and microbial components.	There is no topsoil in the proposed area. Details of impact on soil environment is detailed in Chapter No.4.
30	The Environmental impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.	The nearest water bodies from the project area are an Odai located 200m – NE, Badethala Lake 1.7km-E with chapter-4 Detailed in water environment.
Energy		

31	The measures taken to control Noise. Air, Water. Dust Control and steps adopted to efficiently utilize the Energy shall be furnished.	Details in Chapter 3 environmental monitoring details.
<i>Climate Change</i>		
32	The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities.	Details of carbon emission and mitigation activities are given in the Chapter No.4
33	The Environmental impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock.	The project will not cause significant impact on climatic change. Description about the project and climatic changes is described in Chapter No.4.
<i>Mine Closure Plan</i>		
34	Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.	Details in Chapter 2 mine closure plan
<i>EMP</i>		
35	Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued.	Details in EMP in chapter 10
36	The Environmental Impact Assessment should hold detailed study on EMP with budget for green belt development and mine closure plan including disaster management plan.	Detailed Environment Management Plan for the project to mitigate the anticipated impacts described under Chapter 4 is discussed under Chapter 10.
<i>Disaster Management Plan</i>		
38	To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid/reduce vulnerability to hazards & to cope with disaster/unto ward accidents in & around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued.	Disaster management Plan details in Chapter-7
<i>Others</i>		
39	The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations. schools. Archaeological sites. Structures. railway lines, roads. Water bodies such as streams, odai, vaari, canal, channel. river, lake pond, tank etc.	The letter detailing habitations around the proposed mining is obtained from Kothapetta Village Administrative Office vide Letter Nil Dated: 04.11.2022 and enclosed as Annexure – 3
40	As per the MoEF & CC office memorandum tr.No.22-651201 7-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.	Noted and agreed
41	The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment. The ecological risks and impacts of plastic & microplastics on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.	Details of plastic management is in chapter 7

TERMS OF REFERENCE (ToR) COMPLIANCE

M/s. A.M. Quality Stone-P-3

ToR Identification No TO23B0108TN5558418N dated 13.03.2024

SPECIFIC CONDITIONS				
Sl. No.	ToR Condition	Reply		
1	The proponent shall study the impact of carrying out blasting on the structures located within 500m from the cluster by carrying out Blast-Induced Ground vibration study in the any of the operating mines in the same cluster by involving any one of the reputed scientific / academic institutions - CSIR-Central Institute of Mining and Fuel Research (CIMFR), Dhanbad; NIRM, Bengaluru; IIT(ISM), Dhanbad; Anna University, Chennai; NITK, Surathkal and IIT, Madras.	The details of design for carrying out controlled blasting operation involving line drilling and muffle blasting to minimize blast-induced ground vibrations and controlled fly rock travel beyond 30 m from the blast site is detailed in Chapter 4.		
2	The proponent is requested to carry out a survey and enumerate on the structures located within the radius i)50m ii)100m iii)200m and iv)500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, place of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building number of residents, their profession and income, etc.,	Chapter-3 Socio economic environment details in structure map 300m Radius with table.		
3	The PP shall obtain Certified Compliance Report (CCR) from Integrated Regional Office, MoEF&CC, Chennai, for the earlier Environmental Clearance, if applicable.	Noted and agreed		
Annexure-1				
1	In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following	Yes. Existing quarry		
	i. original pit dimension of the existing quarry	Existing Pit Dimension Pit I: 19,730 sq.mt. 15m (D) Max Pit II: 10,240 Sq.mt. 7m (D) Max		
	ii. Quantity achieved vs EC approved quantity	-		
	iii. Balance quantity as per Mineable Reserve calculated	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">Available Mineable Reserves of Rough Stone (Volume)</td> <td style="text-align: center;">4,81,920m³</td> </tr> </table>	Available Mineable Reserves of Rough Stone (Volume)	4,81,920m ³
Available Mineable Reserves of Rough Stone (Volume)	4,81,920m ³			
	iv. Mined out Depth as on date vs EC permitted depth	-		
	v. Details of illegal/Illicit Mining carried out, if any	Non Illigal		
	vi. Non-Compliance / violation in the quarry during the past working	Non violence		
	vii. Quantity of material mine out outside the mine lease area (or) in the adjacent quarry/field	-		
	viii. condition of safety / benches	Addressed in the Mining Plan by providing adequate safety and making bench formations.		
	ix. Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m.	Ultimate pit =229m(L) x 144m (W) x45m(D) for Mining Plan		
2	Details of habitations around the proposed mining area and latest VAO certificate regarding the location of habitations within 300m radius from the periphery of the site.	The letter detailing habitations around the proposed mining is obtained from Kothapetta Village Administrative Office vide Letter nil Dated: 04.11.2022 and enclosed as Annexure – 3		

3	The PP shall submit a detailed hydrological report indicating the impact of proposed quarrying operations on the waterbodies like lake, water tanks, etc are located within 1km of the proposed quarry.	The hydro-geological study was conducted to evaluate the possible impact on the ground water table. No significant impacts are anticipated on the water bodies around the project area. Details are discussed under Chapter No. 4
4	The proponent shall carry out Bio diversity study through reputed institution and the same shall be included in EIA Report.	The Bio diversity study has been conducted by the Functional Area Expert approved by the NABET. The same has been detailed in the Chapter No.3
5	The DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., up to a radius of 25 km from the proposed site.	Request to consider the secondary source data detailing the nearest reserve forest from Tamil Nadu Geographical Information System (TNGIS). The Nearest Reserve Forest is Peddathalapalli R.F – 3.46km – South East
6	In the case of proposed lease in an existing (or old) quarry where the benches are not formed (or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall the PP shall carry out the scientific studies to assess the slope stability of the working benches to be constructed and existing quarry wall, by involving any one of the reputed quarry and Academic Institutions - CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRI/Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus" The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining the EC.	The applied area has an Existing Pit Dimension Pit I: 19,730 sq.mt. 15m (D) Max Pit II: 10,240 Sq.mt. 7m (D) Max. This was operated without Prior Environmental Clearance. Now, the Mining Plan is prepared considering the bench formation and working safety parameters and approve by Department of Geology & Mining.
7	However, in case of the fresh/virgin quarries, the Proponent shall submit a conceptual 'Slope Stability Plan' for the proposed quarry during the appraisal while obtaining the EC, when the depth of the working is extended beyond 30 m below ground level.	Existing quarry
8	The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/I Class mines manager appointed by the proponent.	The PP affirms that post execution of Quarry Lease Deed the application for Notice of Opening of the Mine along with Notice of Appointment of Competent Person shall be submitted to Director General Mines Safety, Chennai as per MMR, 1961. And ensure the quarry is operated under the Competent Person Employed.
9	The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site.	The details of design for carrying out controlled blasting operation involving line drilling and muffle blasting to minimize blast-induced ground vibrations and controlled fly rock travel beyond 30 m from the blast site is detailed in Chapter 4.
10	The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidences.	The PP has submitted self-declaration affidavit that there are no other quarries applied or existing in his name elsewhere in the state.
11	If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD mines,	Yes. DEIAA – KGI Lr No 35/DEIAA-KGI/Ec.No. 27/2018 Dated 27.02.2018
12	What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?	This is an Existing quarry

13	Quantity of minerals mined out.	This is an Existing quarry
	c) Highest production achieved in any one year	-
	d) Detail of approved depth of mining.	Approved depth of mining 45m Agl.
	e) Actual depth of the mining achieved earlier.	-
	f) Name of the person already mined in that leases area.	M/s. A.M. Quality Stone (Kowshik dev- Managing Partner)
	g) If EC and CTO already obtained, the copy of the same shall be submitted.	EC: Lr. No. SEIAA-TN/F.No.3215/EC/1(a)/2645/2015, Dated:05.01.2016, Lessee : Tmt. Qamrunnisa (Lease period 02.03.2016 – 01.03.2021) EC approved Quantity: 52,620m ³ Depth 10m CTO: F.0770HSR/RS/DEE/TNPCB/HSR/W/2020 Dated: 20.06.2020
	h) Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.	Existing depth is 15m, mining plan depth is 45m Agl.
14	All corner coordinates of the mine lease area, superimposed on a high-resolution Imagery/Toposheet, Geomorphology, Lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and Buffer zone area).	Satellite imagery of the project area along with boundary coordinates is given in the Chapter No 2,
15	The PP shall carry out Drone video survey covering the cluster, green belt, fencing etc.,	The Drone Video of the project site is taken covering the Greenbelt and Fencing around the Project and enclosed as soft copy as CD.
16	The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.	As per the recommendations during SEAC ToR Presentation of the proposal and commitment of PP a count of 2000 Nos of trees were planted as a part of greenbelt development programme all along the periphery of the lease applied area and approach roads and village roads. As well the pp has provided wire fencing as recommended all along the boundary of the lease applied area.
17	The Project proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology justifications, with the anticipated impacts of the mining operations on the surrounding environment and the remedial measures for the same.	Details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology justifications are provided in Chapter 2. The anticipated impacts of the mining operations on the surrounding environment and the remedial measures for the same are provided in Chapter 4.
18	The Project proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of Mines Act, 1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.	The Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of Mines Act, 1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.
19	The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers' tanks, canals, ponds etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Based on actual	The hydro-geological study was conducted to evaluate the possible impact on the ground water table. No significant impacts are anticipated on the water bodies around the project area. Details are discussed under Chapter No. 3.

	monitored data' it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be Provided.	
20	The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quantity, air quality, soil quality & flora/fauna including Traffic/vehicular movement study.	Baseline Data were collected for (Post Monsoon) Oct 2023 to Dec 2023. Details in Chapter No. 3.
21	The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of soil, health, biodiversity, air pollution, water pollution, climate change and flood control & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.	Cumulative impact study has been carried out covering proposed and existing quarries in the cluster and results related to air pollution, water pollution, & health impacts have been given in chapter No. 7, Based on the results, environmental management plan has been prepared and given in Chapter No. 10.
22	Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.	The lower part of the mine pit will be utilized as rain water harvesting structure (Temporary) and the water will be used for the water sprinkling on haul roads and Greenbelt development purpose. Rainwater harvesting structure will be constructed near the mine office.
23	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass pre operational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.	Land use and land cover of the study area is discussed in Chapter No. 3. Land use plan of the project area showing pre-operational, operational and post-operational phases are discussed in Chapter No. 3, Table No 3.3
24	Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be provided.	Not applicable
25	Proximity to Areas declared as 'Critically Polluted' (or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered.	Not Applicable. Project area / Study area is not declared in 'Critically Polluted' Area and does not come under 'Aravalli Range.
26	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.	The lower part of the mine pit will be utilized as rain water harvesting structure (Temporary) and the water will be used for the water sprinkling on haul roads and Greenbelt development purpose. Rainwater harvesting structure will be constructed near the mine office.
27	Impact on local transport infrastructure due to the Project should be indicated.	Traffic density survey was carried out to analyze the impact of transportation in the study area as per IRC guidelines 1961 and it is inferred that there is no significant impact due to the proposed transportation from the project area. Details have been provided in Chapter No.2
28	A tree survey study shall be carried out (nos., name of the species, age, diameter etc.) both within the mining lease applied area & 300m buffer zone and its management during mining activity.	As per the recommendations during SEAC ToR Presentation of the proposal and commitment of PP a count of 2000Nos of trees were planted as a part of greenbelt development programme all along the

		periphery of the lease applied area and approach roads and village roads.
29	A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.	Noted & agreed. Mine closure plan is detailed in Chapter:4.
30	As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study, wherever possible.	Noted, it will submit final EIA/EMP report.
31	The purpose of green belt around the project is to capture the fugitive emissions. Carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix in consultation with the DFO, State Agriculture University. The plant species with dense/moderate canopy of native origin should be chosen. Species of Small medium/tall trees alternating with shrubs should be planted in a mixed manner.	As per the recommendations during SEAC ToR Presentation of the proposal and commitment of PP a count of 2000 Nos of trees were planted as a part of greenbelt development programme all along the periphery of the lease applied area and approach roads and village roads.
32	Taller/one year old Saplings raised in appropriate size of bags; preferably eco-friendly bags should be planted as per the advice of local forest authorities / botanist / Horticulturist with regard to site specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner.	As per the recommendations during SEAC ToR Presentation of the proposal and commitment of PP a count of 2000 Nos of trees were planted as a part of greenbelt development programme all along the periphery of the lease applied area and approach roads and village roads.
33	A Disaster management Plan shall be prepared and included in the EIA/EMP Report.	Disaster management Plan is detailed in Chapter-7
34	A Risk Assessment and management Plan shall be prepared and included in the EIA/EMP Report.	A Risk Assessment and management Plan Chapter- 7
35	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.	Occupational Health impacts are discussed in chapter- 10
36	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.	No Public Health Implications anticipated due to this project. Details of CER and CSR are discussed under Chapter 8.
37	The Socio-economic studies should be carried out within a 5 km buffer zone from the mining activity. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.	Details are listed in Chapter:3.
38	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.	No Litigation is pending
39	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall	Project benefit is given in the Chapter No.8.

	clearly indicate environmental, social, economic, employment potential, etc.	
40	If any quarrying operations were carried out in the proposed quarrying site for which now the EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF & CC, Regional Office, Chennai (or) the concerned DEE/TNPCB.	Not Applicable. The applied area is a new proposal for Environmental Clearance.
41	The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.	Noted and agreed
42	Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Reference besides attracting penal provisions in the Environment (Protection) Act, 1986.	Noted and agreed
ADDITIONAL CONDITIONS- Annexure-B		
<i>Cluster Management committee</i>		
1.	Cluster Management Committee shall be framed which must include all the proponents in the cluster as members including the existing as well as proposed quarry.	Cluster Management Committee has been constituted initially with 3 quarries.
2	The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc..	The information will be shared to the cluster management committee during the monthly meeting.
3	The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.	The list of members of the committee formed will be submitted to AD/Mines before the execution of mining lease.
4	Detailed operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.	All the information has been discussed in Chapter No.2
5	The committee shall deliberate on risk management plan pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan	The risk management plan and disaster management plan will be followed as per this EIA report.
6	The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the environmental policy devised shall be given in detail.	Environmental policy is described in the EIA report Chapter No. 6 and the same will be followed.
7	The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.	A proper action plan regarding the restoration will be followed by the committee
8	The committee shall furnish the Emergency Management plan within the cluster.	The committee will submit the emergency management plan to the respective authority in the stipulated time period.
9	The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public.	The risk management plan and disaster management plan will be followed as per the EIA report.

10	The committee shall furnish an action plan to achieve sustainable development goals with reference to water, sanitation & safety.	A proper action plan with reference to water, sanitation & safety will be devised and submitted by the committee to the respective authority.
11	The committee shall furnish the fire safety and evacuation plan in the case of fire accidents.	The fire safety and evacuation plan will be carried out by as per the respective quarry mines managers
Impact study of mining		
12	Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area covering the entire mine lease period as per precise area communication order issued from reputed research institutions on the following a) Soil health & bio-diversity, physical land chemical features. b) Climate change leading to Droughts, Floods etc. c) Pollution leading to release of Greenhouse gases (GHG), rise in Temperature' & Livelihood of the local people. d) Possibilities of water contamination and impact on aquatic ecosystem health' e) Agriculture, Forestry & Traditional practices. 1) Hydrothermal/Geothermal effect due to destruction in the Environment' g) Bio-geochemical processes and its foot prints including environmental stress' h) Sediment geochemistry in the surface steams.	Details of Soil health is given in Chapter No 3 and biodiversity is given in Chapter No 3. The project will not cause any significant changes in the climate Climatic changes and GHG are described in Chapter No 4. Details of water contamination and impact on aquatic ecosystem is given in Chapter No 4. Hydrothermal/ Geothermal effects due to destruction in the environment, Bio geochemical process and sediment geo chemistry given in the Chapter No 7.
Agriculture & Agro-Biodiversity		
13	Impact on surrounding agricultural fields around the proposed mining Area.	As the proposed lease area is dominantly surrounded by mining land, barren land, and fallow land, the impact on the surrounding agricultural fields if present will be low. With proper mitigation measures, the project will be carried out to reduce the impact further to the level of negligence.
14	Impact on soil flora & vegetation around the project site.	The vegetation details have been provided in chapter III. There is no schedule I species of animals observed within study area as per Wildlife Protection Act, 1972 and no species falls in vulnerable, endangered or threatened category as per IUCN. There is no endangered red list species found in the study area.
15	Details of type of vegetations including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetations all along the boundary of the proposed mining area shall committed mentioned in EMP.	The vegetation details have been provided in chapter III. There is no schedule I species of animals observed within study area as per Wildlife Protection Act, 1972 and no species falls in vulnerable, endangered or threatened category as per IUCN. There is no endangered red list species found in the study area
16	The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the soil micro flora. fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.	Details are discussed in Chapter No.3
17	Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.	The Eco System of the area will be retained during the mining operation by the way of planting trees in the boundary barrier and un utilized areas. After completion of mining operation, the quarried-out pit will be facilitated to collect the rainwater to pit act as temporary reservoir.
18	The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands. Horticulture, Agriculture and livestock.	The project area is bounded by dry barren land on all the sides.

Forest		
19	The project proponent shall detail study on impact of mining on Reserve forests free ranging wildlife.	There is no Reserve Forest within 1km radius from the project area (Peddathalapalli R.F-2.30km-SW). The mining operation will not cause any significant impact to the Reserve Forest and Wild life Sanctuaries.
20	The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.	chapter 3 details of Ecology and Biodiversity, and 4 endemic vulnerable and endangered indigenous flora and fauna.
21	The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.	850trees inside lease area. Outside trees 1550 trees
22	The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.	Anticipated Environment Impact and Mitigation measures are detailed in Chapter No.4
Water Environment		
23	Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period.	Hydro-geological study considering the contour map of the water table detailing Chapter-3
24	Erosion Control measures.	Garland drainage structures will be constructed around the lease area to control the erosion, as discussed in Section 4.3 under Chapter 4.
25	Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby villages, water-bodies/ Rivers. & any ecological fragile areas.	In the EIA report Chapter No. IV enumerate the anticipated impact due to the project and mitigation measures
26	The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.	Detailed under Chapter 3.
27	The project proponent shall study and furnish the details on potential fragmentation impact on natural environment by the activities.	Details are given in the Chapter No 4.
28	The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts.	Detailed discussed in the chapter 4
29	The Terms of Reference should specifically study impact on soil health, soil erosion, the soil, physical, chemical components and microbial components.	Details of impact on soil environment is detailed in Chapter No.4.
30	The Environmental impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.	The nearest water bodies from the project area are an Odai located 150m – S
Energy		
31	The measures taken to control Noise. Air, Water. Dust Control and steps adopted to efficiently utilize the Energy shall be furnished.	Details in Chapter 3 environmental monitoring details.
Climate Change		
32	The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the	Details of carbon emission and mitigation activities are given in the Chapter No.4

	measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities.	
33	The Environmental impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock.	The project will not cause significant impact on climatic change. Description about the project and climatic changes is described in Chapter No.4.
Mine Closure Plan		
34	Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.	Details in Chapter 2 mine closure plan
EMP		
35	Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued.	Details in EMP in chapter 10
36	The Environmental Impact Assessment should hold detailed study on EMP with budget for green belt development and mine closure plan including disaster management plan.	Detailed Environment Management Plan for the project to mitigate the anticipated impacts described under Chapter 4 is discussed under Chapter 10.
Disaster Management Plan		
38	To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid/reduce vulnerability to hazards & to cope with disaster/untoward accidents in & around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued.	Disaster management Plan details in Chapter-7
Others		
39	The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations. schools. Archaeological sites. Structures. railway lines, roads. Water bodies such as streams, odai, vaari, canal, channel. river, lake pond, tank etc.	The letter detailing habitations around the proposed mining is obtained from Kothapetta Village Administrative Office vide Letter Nil Dated: 08.02.2023 and enclosed as Annexure – 3
40	As per the MoEF & CC office memorandum tr.No.22-651201 7-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.	Noted and agreed
41	The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment. The ecological risks and impacts of plastic & microplastics on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.	Details of plastic management is in chapter 7

Standard Terms of Reference for (Mining of minerals)

S. No	Terms of Reference	Reply
1.1	An EIA-EMP Report shall be prepared for peak capacity (.....MTPA) operation in an ML/project area of.....ha based on the generic structure specified in Appendix III of the EIA Notification, 2006.	Noted and agreed

1.2	An EIA-EMP Report would be prepared for peak capacity operation to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for.... MTPA of mineral production based on approved project/Mining Plan for.... MTPA. Baseline data collection can be for any season (three months) except monsoon.	Peak capacity of 1,33,980m ³ operation to cover the impacts and environment management plan in chapter- IV and Chapter 10 covered in project specific activities. Baseline Data were collected for Post monsoon Season Oct– Dec 2023 as per CPCB Notification and MoEF & CC Guidelines. Details in Chapter No. III
1.3	Propoer KML file with pin drop and coordinate of mine at 500-1000 m interval be provided.	Noted, Google earth image showing lease area with Coordinates of pillars in chapter-II.
1.4	A Study area map of the core zone (project area) and 10 km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage pattern including rivers/streams/nullahs/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries, mines, and other polluting sources. In case of ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km study area should be given. The above details to be furnished in tabular form also.	Land use and land cover of the 10km Radius of study area is discussed in Chapter No. III. Geology map of the project area covering 10km radius Figure No. 2.5, Page No. 20. Geomorphology of the area is given in Chapter No 2 Figure No 2.6, Page No. 20 There are No National Parks, Biosphere Reserves, Wildlife Corridors, and Tiger/Elephant Reserves within 10 km Radius from the periphery of the project area.
1.5	Map showing the core zone delineating the agricultural land (irrigated and un-irrigated, uncultivable land as defined in the revenue records, forest areas (as per records), along with other physical features such as water bodies, etc should be furnished.	Land use and land cover of the study area is discussed in Chapter No. III with Physical features such as waterbodies, odai, canal etc.,
1.6	A contour map showing the area drainage of the core zone and 25 km of the study area (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated in the separate map.	DEM data using Drainage pattern around 10km radius showing streams and lakes etc., discussed in Chapter No. 3.
1.7	Catchment area with its drainage map of 25 km area within and outside the mine shall be provided with names, details of rivers/ riverlet system and its respective order. The map should clearly indicate drainage pattern of the catchment area with basin of major rivers. Diversion of drains/ river need eloboration in form of length, quantity and quality of water to be diverted.	Drainage pattern around 10km radius showing streams and lakes etc is discussed in Chapter No. 3.

1.8	<p>(Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.</p>	<p>Details in chapter-2 showing the land features. And also enclosed Approved mining plan in annexure</p>
1.9	<p>Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.</p>	<p>It is an opencast quarrying operation proposed to operate in Mechanized method. The Rough Stone quarry formation is a hard, compact and homogeneous body.</p> <p>The height and width of the bench will be maintained as 5m with 90° bench angles.</p> <p>Quarrying activities will be carried out under the supervision of Competent Persons like Mines Manager, Mines Foreman and Mining Mate.</p> <p>Necessary permissions will be obtained from DGMS after obtaining Environmental Clearance.</p>
1.10	<p>Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations</p>	<p>Impact Studies and Mitigation Measures of Water Environment including Surface Water and Ground Water are discussed in Chapter 4.</p>
1.11	<p>A detailed Site plan of the mine showing the proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, Stockyard, township/colony (within and adjacent to the ML), undisturbed area -if any, and landscape features such as existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification of thereof in terms of construction of embankments/bunds, proposed diversion/re-channelling of the water courses, etc., approach roads, major haul roads, etc should be indicated.</p>	<p>Not Applicable.</p> <p>The details of waste dump management are given in the Chapter No. 4</p>

<p>1.12</p>	<p>Original land use (agricultural land/forestland/grazing land/wasteland/water bodies) of the area should be provided as per the tables given below. Impacts of project, if any on the land use, in particular, agricultural land/forestland/grazing land/water bodies falling within the lease/project and acquired for mining operations should be analyzed. Extent of area under surface rights and under mining rights should be specified. Area under Surface Rights</p> <p>Area under Surface Area Under Mining Rights(ha)</p> <table border="1"> <thead> <tr> <th>S.N</th> <th>ML/Project</th> <th>Land use</th> <th></th> </tr> </thead> <tbody> <tr> <td colspan="4">Area under Both (ha)</td> </tr> <tr> <td></td> <td></td> <td>Rights(ha)</td> <td>(ha)</td> </tr> <tr> <td>1</td> <td>Agricultural land</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>Forest Land</td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>Grazing Land</td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>Settlements</td> <td></td> <td></td> </tr> <tr> <td>5</td> <td>Others (specify)</td> <td></td> <td></td> </tr> </tbody> </table>	S.N	ML/Project	Land use		Area under Both (ha)						Rights(ha)	(ha)	1	Agricultural land			2	Forest Land			3	Grazing Land			4	Settlements			5	Others (specify)			<p>Land use and land cover of the study area is discussed in Chapter No. 3.</p> <p>Land use plan of the project area showing pre-operational, operational and post-operational phases are discussed in Chapter No. 2, Table No 2.3.</p>
S.N	ML/Project	Land use																																
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<p>1.13</p>	<p>Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and</p>	<p>Detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] was carried out and discussed under Chapter No. 3.</p> <p>There is no schedule I species of animals observed within study area as per Wildlife Protection Act 1972 as well as no species is in vulnerable, endangered or threatened category as per IUCN. There is no endangered red list species found in the study area.</p>																																
<p>1.14</p>	<p>One-season (other than monsoon) primary baseline data on environmental quality - air (PM10, PM2.5, SOx, NOx and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided. The detail of NABL/MoEF&CC certification of the respective laboratory and NABET accreditation of the consultant to be provided.</p>	<p>Baseline Data were collected for Post monsoon season Oct–Dec2023 as per CPCB Notification and MoEF & CC Guidelines.</p> <p>Details in Chapter No. 3.</p>																																

1.15	<p>Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air) / downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.</p>	<p>Details in chapter-3 showing the various sampling stations As per CPCB guidelines.</p>
1.16	<p>For proper baseline air quality assessment, Wind rose pattern in the area should be reviewed and accordingly location of AAMSQ shall be planned by the collection of air quality data by adequate monitoring stations in the downwind areas. Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e., dispersed in 10 km buffer area. In case of expansion, the displayed data of CAAQMS and its comparison with the monitoring data to be provided.</p>	<p>Air Quality Modelling and windrose pattern for prediction of incremental GLC's of pollutant was carried out using AERMOD view 13 Model.</p> <p>Details in Chapter No. 4.</p>
1.17	<p>A detailed traffic study along with presence of habitation in 100 mts distance from both side of road, the impact on the air quality with its proper measures and plan of action with timeline for widening of road. The project will increase the no. of vehicle along the road which will indirectly contribute to carbon emission so what will be the compensatory action plan should be clearly spell out</p>	<p>Traffic density survey was carried out to analyse the impact of Transportation in the study area as per IRC guidelines 1961 and it is inferred that there is no significant impact due to the proposed transportation from the project area. Details in Chapter-II.</p>
1.18	<p>The socio-economic study to conducted with actual survey report and a comparative assessment to be provided from the census data should be provided in EIA/ EMP report also occupational status & economic status of the study area and what economically project will contribute should be clearly mention. The study should also include the status of infrastructural facilities and amenities present in the study area and a comparative assessment with census data to be provided and to link it with the initialization and quantification of need-based survey for CSR activities to be followed.</p>	<p>Detailed in chapter-3 socio-economic study with occupational status & economic status of the study area. The study should also include the status of infrastructural facilities and amenities present in the study area</p> <p>CSR are discussed under Chapter 8.</p>

1.19	The Ecology and biodiversity study should also indicate the likely impact of change in forest area for surface infrastructural development or mining activity in relation to the climate change of that area and what will be the compensatory measure to be adopted by PP to minimize the impact of forest diversion.	Detailed Ecology and biodiversity study in chapter-3
1.20	Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower for the mine should be submitted.	Detailed in chapter-4 population in the impact zone and measures for occupational health and safety and proposed occupational health in chapter-X
1.21	Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted.	Noted and agreed
1.22	Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.	The ground water table is at 67m below ground level. In these projects, ultimate depth is 45m Maximum from the general ground profile. It is inferred the quarrying activities in the Cumulative EIA project (Quarry) will not intersect the Ground water table.
1.23	Study on land subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.	Detailed in Chapter-IV Anticipated and mitigation measures of in the study area.
1.24	Detailed water balance should be provided. The break up of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users should be provided.	Total Water Requirement: 2.3 KLD Discussed under Chapter 2, Table No 2.17, Page No. 44.. The required water will be met from rainwater accumulated in mine pit (when available) and from the approved water vendors.
1.25	PP shall submit design details of all Air Pollution control equipment (APCEs) to be implemented as part of Environment Management Plan vis-à-vis reduction in concentration of emission for each APCEs	Methodology And Instrument Used For Air Quality Analysis in chapter-3 and Air Pollution control equipment (APCEs) in chapter-10 sub 10.2 Environmental policy.
1.26	PP shall propose to use LNG/CNG based mining machineries and trucks for mining operation and transportation of mineral. The measures adopted to conserve energy or use of renewable sources shall be explored.	Details in Machinery and equipments details in Chapter-2
1.27	PP to evaluate the green house emission gases from the mine operation/ washery plant and corresponding carbon absorption plan.	Noted and Agreed

1.28	Site specific Impact assessment with its mitigation measures, Risk Assessment and Disaster Preparedness and Management Plan should be	A Risk Assessment and Disaster Preparedness and management Plan Chapter- 7
1.29	Impact of choice of mining method, technology, selected use of machinery and impact on air quality, mineral transportation, handling & storage/stockyard, etc, Impact of blasting, noise and vibrations should be provided.	Detailed in Machinery and technology used Chapter-3 Table 3.17 – Methodology and Instrument Used for Air Quality Analysis Detailed study in chapter-4 Impact of choice of mining method and impact on air quality and blasting and noise and vibrations.
1.30	Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these	Traffic density survey was carried out to analyse the impact of Transportation in the study area as per IRC guidelines 1961 and it is inferred that there is no much significant impact due to the proposed transportation from the project area. Details in Chapter 2. Infrastructure & other facilities will be provided to the Mine Workers after the grant of quarry lease and the same has been discussed in the Chapter No.2.
1.31	Details of various facilities to be provided to the workers in terms of parking, rest areas and canteen, and effluents/pollution load resulting from these activities should also be given.	Infrastructure & other facilities will be provided to the Mine Workers after the grant of quarry lease and the same has been discussed in the Chapter No.2
1.32	The number and efficiency of mobile/static water jet, Fog cannon sprinkling system along the main mineral transportation road inside the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality should be provided.	Noted and agreed
1.33	Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre-mining status should be provided. A Plan for the ecological restoration of the mined-out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.	Discussed under Chapter 2. Mine Closure Plan is a part of Approved Mining Plan enclosed as Annexure Volume – 1.
1.34	Adequate greenbelt nearby areas, mineral stock yard and transportaion area of mineral shall be provided with details of species selected and survival rate Greenbelt development should be undertaken particularly around the transport route.	Greenbelt Development Plan is discussed under Chapter 4,
1.35	Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.	The total cost and the details are given in the Chapter No. 10

1.36	Details of R&R. Detailed project specific R&R Plan with data on the existing socio- economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.	Not Applicable. There are no approved habitations within a radius of 300 meters. Therefore, R&R Plan / Compensation details for the Project Affected People (PAP) is not anticipated and Not Applicable for this project.
1.37	CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.	CSR are discussed under Chapter 8. And specific budgetary provisions (capital and recurring) for specific activities over the life of the project in chapter-10
1.38	Corporate Environment Responsibility:	CER are discussed under Chapter 8.
1.39	a) The Company must have a well laid down Environment Policy approved by the Board of Directors.	Noted and agreed
1.40	b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.	Detailed in chapter-10 The Environment Policy
1.41	c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.	Noted and agreed
1.42	d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.	Noted and agreed
1.43	e) Environment Managment Cell and its responsibilities to be clearly spleel out in EIA/ EMP report	The Environment Monitoring Cell discussed under Chapter 6
1.44	f) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.	Noted and agreed
1.45	Status of any litigations/ court cases filed/pending on the project should be provided.	No litigation is pending in any court against this project
1.46	PP shall submit clarification from DFO that mine does not fall under corridors of any National Park and Wildlife Sanctuary with certified map showing distance of nearest sanctuary.	DFO: No.6846/2023/L dated: 10.07.2023 Cauvery North Wildlife Sanctuary-36.5km-SW Cauvery South Wildlife Sanctuary-41km-SW
1.47	Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval. NOC from Flood and Irrigation Dept. (if req.), etc. wherever applicable	Noted and agreed

1.48	<p>Details on the Forest Clearance should be given as per the format given:</p> <p>Total ML Total Balance area for which Status of apply For Project Area Forest Date Extent of FC is yet to be diversion of forest of FC Forest Land (ha)land (ha)obtained land If more than one provides details of each FC</p>	Noted and agreed
1.49	<p>In case of expansion of the proposal, the status of the work done as per mining plan and approved mine closure plan shall be detailed in EIA/ EMP report.</p>	Enclosed Approved mining plan in Annexure volume-I
1.50	<p>Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the time bound action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English</p>	The outcome of public hearing will be updated in the final EIA/AMP report.
1.51	<p>PP shall carry out survey through drone highlighting the ground reality for atleast 10 minutes.</p>	Noted and agreed
1.52	<p>Detailed Chronology of the project starting from the first lease deed allotted/Block allotment/ Land acquired to its No. of renewals, CTO /CTE with details of no. renewals, previous EC(s) granted details and its compliance details, NOC details from various Govt bodies like Forest NOC(s), CGWA permissions, Power permissions, etc as per the requisites respectively to be furnished in tabular</p>	Noted and agreed
1.53	<p>The first page of the EIA/ EMP report must mention the peak capacity production, area, detail of PP, Consultant (NABET accreditation) and Laboratory (NABL / MoEF & CC certification)</p>	Noted and agreed
1.54	<p>The compliances of ToR must be properly cited with respective chapter section and page no in tabular form and also mention sequence of the respective ToR complied within the EIA-EMP report in all the chapters sections</p>	Noted and agreed

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CHAPTER – 1: INTRODUCTION

1.0 Preamble

Environmental Impact Assessment (EIA) is the management tool to ensure the sustainable development and it is a process, used to identify the environmental, social and economic impacts of a project prior to decision-making. It is a decision-making tool, which guides the decision makers in taking appropriate decisions for any project. EIA systematically examines both beneficial and adverse consequences of the project and ensures that these impacts are taken into account during the project designing. It also reduces conflicts by promoting community participation, information, decision makers, and helps in developing the base for environmentally sound project.

Rough Stone quarry are the major requirements for construction industry. This EIA report is prepared by considering Cumulative load of all proposed & existing quarries of Kothapetta Rough Stone Cluster Quarries consisting of three Proposed quarries and one existing quarry with total extent of Cluster of 16.44.9Ha in Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu State, cluster area calculated as per MoEF & CC Notification S.O. 2269(E) Dated 1st July 2016.

This EIA Report is prepared in compliance with ToR obtained for the below proposals in Table 1.1 and the Baseline Monitoring study has been carried out during the period of Oct -Dec 2023

TABLE 1.1: ToR OBTAINED PROJECTS

CODE	Name of the proponent	Extent (Ha)	Terms of Reference (ToR)
P1	M/s. Sri Devaraajaa ‘M’ Sand	4.00.0	Lr No. SEIAA-TN/F.No.10244/2023/SEAC/ToR-1681/2024 Dated:14.02.2024
P2	Tmt.K.M. Vijaya	4.00.0	Lr No. SEIAA-TN/F.No.10248/SEAC/ToR-1676/2024 Dated:14.02.2024
P3	M/s. A.M. Quality Stone	4.74.9	ToR Identification No TO23B0108TN5558418N dated 13.03.2024
	Total	14.74.9	

Source: ToR Letter’s of the respective project proponents

1.1 Purpose of the report

The Ministry of Environment and Forests, Govt. of India, through its EIA notification S.O. 1533(E) of 14th September 2006 and its subsequent amendments as per Gazette Notification S.O. 3977 (E) of 14th August 2018, Mining Projects are classified under two categories i.e. A (> 100 Ha) and B (≤ 100 Ha), and Schematic Presentation of Requirements on Environmental Clearance of Minor Minerals including cluster situation in Appendix – XI.

Now, as per Order Dated: 04.09.2018 & 13.09.2018 passed by Hon'ble National Green Tribunal, New Delhi in O.A. No. 173 of 2018 & O.A. No, 186 of 2016 and MoEF & CC Office Memorandum F. No. L-11011/175/2018-IA-II (M) Dated: 12.12.2018 clarified the requirement for EIA, EMP and therefore, Public Consultation for all areas from 5 to 25 ha falling in Category B1 and appraised by SEAC/ SEIAA as well as for cluster situation.

The proposed projects are categorized under category “B1” Activity 1(a) (mining lease area in cluster situation) and will be considered at SEIAA – TN after conducting Public Hearing and Submission of EIA/EMP Report for Grant of Environmental Clearance.

“Draft EIA report prepared on the basis of ToR Issued for carrying out public hearing for the grant of Environmental Clearance from SEIAA, Tamil Nadu”

FIG.1.1 SATELLITE IMAGERY CLUSTER QUARRIES



Cluster area is calculated as per MoEF & CC Notification – S.O. 2269 (E) Dated: 01.07.2016

Note: As per above notification S.O.2269(E) dated: 01.07.2016 in para (b) in Appendix XI, - (i)(6) A cluster shall be formed when the distance between the peripheries of one lease is less than 500 meters from the periphery of other lease in a homogeneous mineral area which shall be applicable to the mine lease or quarry licenses granted on and after 9th September, 2013

1.2 Identification of Project and Project Proponent

1.2.1 Identification of Project

The project areas in the cluster are Patta Land., no forest land is involved

TABLE 1.2: PROPOSED PROJECTS IN THE CLUSTER

Description	P1	P2	P3
Name of the Project	M/s. Sri Devaraajaa 'M' Sand Rough Stone quarry	Tmt.K.M. Vijaya Rough Stone quarry	M/s. A.M. Quality Stone Rough Stone quarry
S.F. No.	78/1A(P), 78/1B(P)	78/1B (P),	87/1B1B & 87/1B2B,
Extent	4.00.0 Ha	4.00.0 Ha	4.74.9
Village & Taluk	Kothapetta Village, Krishnagiri Taluk		
District	Krishnagiri District		

Source: Approved Scheme of Mining with PMCP of the respective projects

1.2.2 Identification of Project Proponent

TABLE 1.3: DETAILS OF PROJECT PROPONENT

PROPOSAL – P1	
Name of the Company	M/s. Sri Devaraajaa 'M' Sand
Address	D.No.58B, Gandhi Nagar, Krishnagiri Town, Krishnagiri District – 635001
Mobile	-
Status	Partnership firm
PROPOSAL – P2	
Name of the Company	Tmt.K.M. Vijaya W/o.D.Mathiazhagan
Address	D.No.58B, Gandhi Nagar, Krishnagiri Town, Krishnagiri District – 635001.
Mobile	-
Status	Individual
PROPOSAL – P3	
Name of the Company	M/s. A.M. Quality Stone (Kowshik dev- Managing Partner)
Address	S.F.Nos. 87/1B1 & 87/1B2, Akkalapuram, Kothapetta village, Krishnagiri Taluk & District – 635 001
Mobile	-
Status	Partnership firm

Source: Approved Scheme of Mining and Mining Plan with PMCP of the respective projects

1.3 Brief description of the project

1.3.1 Nature and size of the Project

The quarrying operation is proposed to be carried out by Opencast Mechanized Mining method with 5.0m bench height and 5.0m bench width by deploying Jack Hammer Drilling & Slurry Explosive during blasting. Hydraulic Excavator and tippers are used for Loading and transportation. Rock Breakers are deployed to avoid secondary blasting.

TABLE 1.4: SALIENT FEATURES OF THE PROPOSED PROJECTS IN CLUSTER-P1-P2

SALIENT FEATURES OF PROPOSAL "P1"				
Name of the Mine	M/s. Sri Devaraajaa 'M' Sand (Thiru. D.Mathiazhagan- Managing Partner)			
Land Type	It is a Patta land – non-Forest			
S.F. No.	78/1A(P), 78/1B(P)			
Extent	4.00.0 Ha			
Previous EC clearance details	DEIAA – KGI Lr No 35/DEIAA-KGI/Ec.No. 27/2018 Dated 27.02.2018 EC Quantity: 10,25,995m ³ Depth 71m			
TNPCB /CTO Copy	F.1682HSR/RS/DEE/TNPCB/HSR/A/2022 Dated: 22.08.2022			
Previous quarry operation details	It is an Existing application			
Existing Pit Dimension	210m(L) x 97m (W) x20m(D) (Avg)			
Depth of Mining	41m (1m gravel +40m Rough stone)			
Geological Resources	Rough Stone quarry (Volume)	Recoverable Geological in m ³ 95%	Mine waste in m ³ 5%	Gravel
	10,85,740 m ³	1,031,457	54,283	2,329m ³
Mineable Reserves	Rough Stone quarry (Volume)	Mineable reserves Recoverable in m ³ 95%	Mine waste in m ³ 5%	Gravel
	5,13,365m ³	4,87,698	25,667	799m ³
Production for Scheme period (Approved SOM) (2023-2028)	Rough Stone quarry (Volume)	Recoverable reserves in m ³ 95%	Mine waste in m ³ 5%	Gravel
	5,13,365 m ³	4,87,698	25,667	799 m ³
Peak Production in this Scheme period	1,19,857 m ³ of Rough stone			
Mining Plan Period / Lease Period	5 Years			
Ultimate Pit Dimension	287m (L) X 121m (W) X 41m (D)			
Toposheet No	57 -L/2			
Water table depth	76m-82m			
Water Requirements	2.5 KLD			
Latitude	12°32'49.8798"N to 12°32'46.6000"N			
Longitude	78°12'49.4269"E to 78°12'39.2801"E			
Highest Elevation	Slightly elevated topography, surrounded by quarries and Crushing units. Altitude of the area is 537m MSL.			
Machinery	Jack Hammer	5		
	Compressor	1		
	Hydraulic Excavator	2		
	Tippers	3		
Blasting	Drilling is carried out by a Jack Hammer drill of 30-32mm diameter, Nitrate Mixture Gelatine packets, and electric / ordinary detonators with delay elements will be used for blasting purpose.			
Manpower Deployment	21 Nos			
Total Cost	A. Fixed Asset Cost	Rs. 33,00,000/-		
	B. Operational Cost	Rs. 40,00,000/-		
	C.EMP Cost	Rs. 4,30,000/-		
	Total	Rs. 77,30,000/-		

CER Cost	Rs.5,00,000/-			
Nearest Habitation	590m-W			
Nearest R.F	Peddathalapalli R.F-2.2km-SW			
Nearest Wildlife	Cauvery North Wildlife Sanctuary-26km-SW Cauvery South Wildlife Sanctuary-40km-SW			
SALIENT FEATURES OF PROPOSAL "P2"				
Name of the Mine	Tmt.K.M. Vijaya			
Land Type	It is a Patta land – non-Forest			
S.F. Nos	78/1B (P),			
Extent	4.00.0 Ha			
Previous EC clearance details	DEIAA – KGI Letter No. 34/DEIAA-KGI/Ec.No. 26/2018 Dated 27.02.2018 EC Quantity: 10,80,884m ³ Depth 71m			
TNPCB /CTO Renewal Copy	F.1682HSR/RS/DEE/TNPCB/HSR/A/2022 Dated: 22.08.2022			
Previous quarry operation details	It is an Existing Lease.			
Existing Pit Dimension	95.0m(L) x 93m (W) x12m(D) (Avg)			
Geological Reserves	Rough Stone quarry (Volume)	Recoverable Geological in m ³ 95%	Mine waste in m ³ 5%	Gravel
	16,04,820m ³	15,24,579	80,241	22,960m ³
Mineable Reserves	Rough Stone quarry (Volume)	Mineable reserves Recoverable in m ³ 95%	Mine waste in m ³ 5%	Gravel
	9,68,575m ³	9,20,148	48,427	20,711 m ³
Production for Scheme period (Approved SOM)(2023-2028)	Rough Stone quarry (Volume)	Recoverable reserves in m ³ 95%	Mine waste in m ³ 5%	Gravel
	7,93,205m ³	7,53,546	39,659	20,711 m ³
Peak Production in this Scheme period	2,26,922 m ³ of Rough stone			
Approved Scheme of Mining Plan Period / Lease Period	5 Years			
Depth of mining	31m (1m Gravel +30m Rough stone)			
Ultimate Pit Dimension	286m(L) x 136m (W) x41m(D)			
Toposheet No	57 L/2			
Latitude	12°32'42.0172''N to 12°32'44.4928''N			
Longitude	78°12'54.6408''E to 78°12'42.8804''E			
Highest elevation	Slightly elevated topography, surrounded by quarries and Crushing units. Altitude of the area is 537m MSL.			
Water table depth	76-82m			
Waterlevel requirements	2.5KLD			
Machinery proposed	Jack Hammer	5		
	Compressor	1		
	Hydraulic Excavator	2		
	Tippers	3		
Blasting	The massive formation shall be broken into pieces of portable size by drilling and proposed control blasting using jack hammers and shot hole Blasting. Usage of Slurry Explosive with MSD detonators			
Manpower Deployment	21Nos			
Total Project Cost	A. Fixed Asset Cost	Rs. 32,90,000/-		
	B. Operational Cost	Rs. 40,00,000/-		

	C.EMP Cost		Rs. 4,30,000/-
	Total		Rs. 77,20,000/-
CER Cost	Rs.5,00,000/-		
Nearest Habitation	700m-W		
Nearest R.F	Peddathalapalli R.F-2.30km-SW		
Nearest Wildlife	Cauvery North Wildlife Sanctuary-26km-SW Cauvery South Wildlife Sanctuary-41km-SW		
SALIENT FEATURES OF PROPOSAL "P3"			
Name of the Mine	M/s. A.M. Quality Stone (Kowshik dev- Managing Partner)		
Land Type	It is a Patta land – non-Forest		
S.F. Nos	87/1B1B & 87/1B2B		
Extent	4.74.90 Ha		
Previous EC clearance details	Lr. No. SEIAA-TN/F.No.3215/EC/1(a)/2645/2015, Dated:05.01.2016 EC approved Quantity: 52,620m ³ Depth 10m		
TNPCB /CTO Renewal Copy	F.0770HSR/RS/DEE/TNPCB/HSR/W/2020 Dated: 20.06.2020		
DFO NOC Copy	No.6846/2023/L dated: 10.07.2023		
Previous quarry operation details	Previous Lessee: Tmt. Qamrunnisa Previous Lease Period: 02.03.2016 – 01.03.2021, S.F.Nos 87/1B1(Part) & 87/1B2 (Part) (Extent : 4.75.0 Ha) Proceeding No: Roc No. 08/2013/Mines-1, Dated: 05.02.2016 It is an Existing Lease.		
Existing Pit Dimension	Pit I: 19,730 sq.mt. 15m (D) Max Pit II: 10,240 Sq.mt. 7m (D) Max		
Geological Reserves	Rough Stone quarry (Volume)	Recoverable Geological in m ³ 100%	Topsoil
	8,11,453m ³	8,11,453m ³	9,469m ³
Mineable Reserves	Rough Stone quarry (Volume)	Mineable reserves Recoverable in m ³ 100%	Topsoil
	4,81,920m ³	4,81,920m ³	8,706 m ³
Production for Scheme period (Approved Mining Plan)	Rough Stone quarry (Volume)	Recoverable reserves in m ³ 100%	Topsoil
	4,81,920m ³	4,81,920m ³	8,706 m ³
Peak Production in the mining plan period	1,33,980m ³ of Rough stone		8,706 m ³ Topsoil
Approved Mining Plan Period / Lease Period	5 Years		
Depth of mining	45 (1m Topsoil +44m Roughstone)		
Ultimate Pit Dimension	229m(L) x 144m (W) x45m(D)		
Toposheet No	57 L/2		
Latitude	12° 33' 05.33" N to 12° 32' 58.37" N		
Longitude	78° 12' 53.41" E to 78° 12' 52.97" E		
Highest elevation	Almost an elevated sloping towards West covered with the Roughstone Altitude of the area is 565m MSL.		
Water table depth	The Ground water is about 67m depth from ground level.		
Waterlevel requirements	2.3KLD		
Machinery proposed	Jack Hammer	4	
	Compressor	2	
	Hydraulic Excavator	3	
	Tippers	3	

Blasting	The massive formation shall be broken into pieces of portable size by drilling and proposed control blasting using jack hammers and shot hole Blasting. Usage of Slurry Explosive with MSD detonators	
Manpower Deployment	18 Nos	
Total Project Cost	A. Fixed Asset Cost	Rs. 50,12,000/-
	B. Operational Cost	Rs. 30,00,000/-
	C.EMP Cost	Rs. 3,80,000/-
	Total	Rs. 83,92,000/-
CER Cost	Rs.5,00,000/-	
Nearest Habitation	210m-E	
Nearest R.F	Peddathalapalli R.F-2.77km-SW	
Nearest Wildlife	Cauvery North Wildlife Sanctuary-36.5km-SW Cauvery South Wildlife Sanctuary-41km-SW	

Source: Approved Scheme of Mining Plan of the respective proposals

Source: Approved Mining Plan and PFR Report

1.3.2 Location of the project-P1

- The Altitude of the area is 537m (max) Mean Sea level
- The area is mentioned in GSI Topo sheet No. 57 L/2
- The Latitude between of 12°32'49.8798"N to 12°32'46.6000"N
- The Longitude between of 78°12'49.4269"E to 78°12'39.2801"E on WGS 1984 datum

1.3.3 Location of the project-P2

- The Altitude of the area is 537m (max) above Mean Sea level
- The area is mentioned in GSI Topo sheet No. 57 L/2
- The Latitude between of 12°32'42.0172"N to 12°32'44.4928"N
- The Longitude between of 78°12'54.6408"E to 78°12'42.8804"E on WGS 1984 datum

1.3.4 Location of the project-P3

- The Altitude of the area is 565m (max) above Mean Sea level
- The area is mentioned in GSI Topo sheet No. 57 L/2
- The Latitude between of 12° 33' 05.33" N to 12° 32' 58.37" N The Longitude between of 78° 12' 53.41" E to 78° 12' 52.97" E on WGS 1984 datum

FIG1.2 KEY MAP SHOWING THE LOCATION OF THE PROJECT SITE

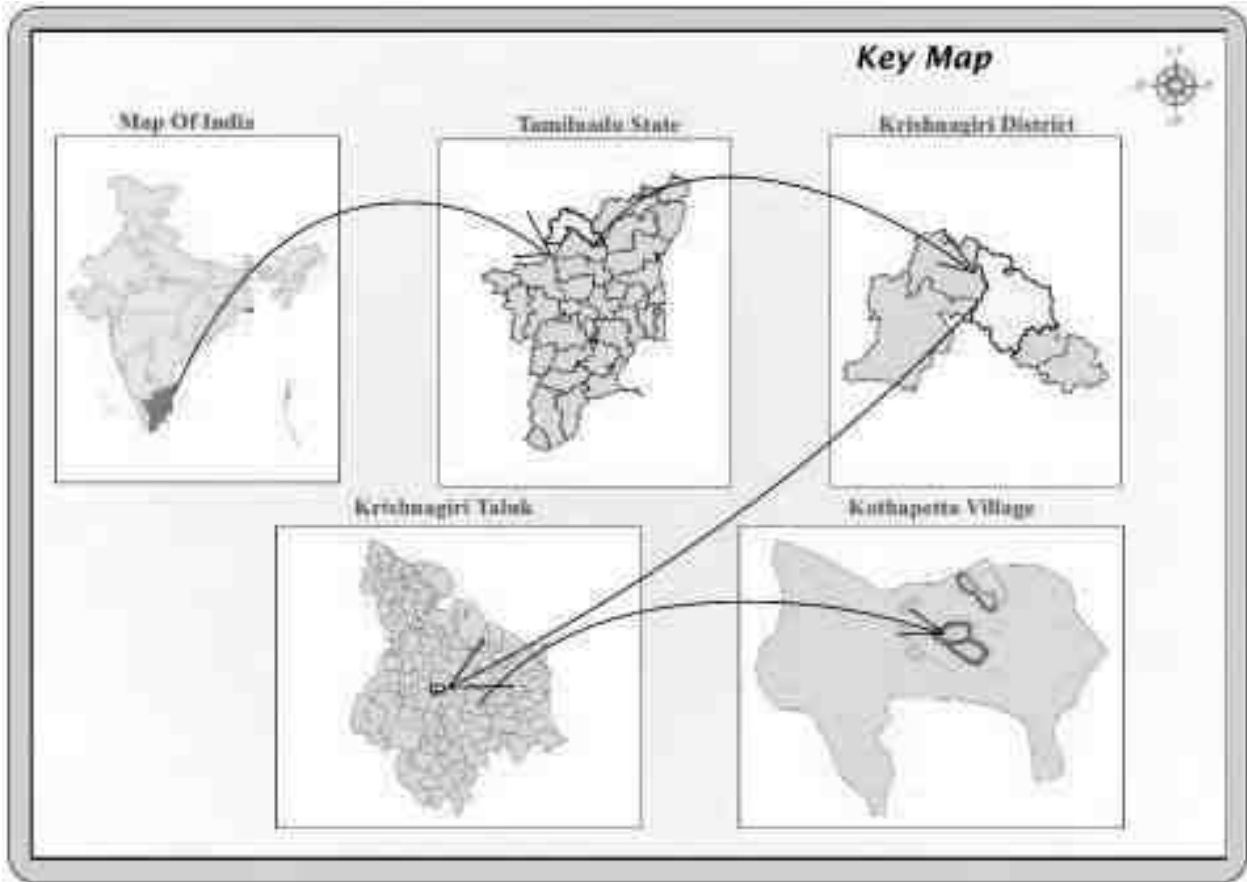


FIGURE 1.3: TOPOSHEET SHOWING LOCATION OF THE PROJECT SITE AROUND 10 KM RADIUS

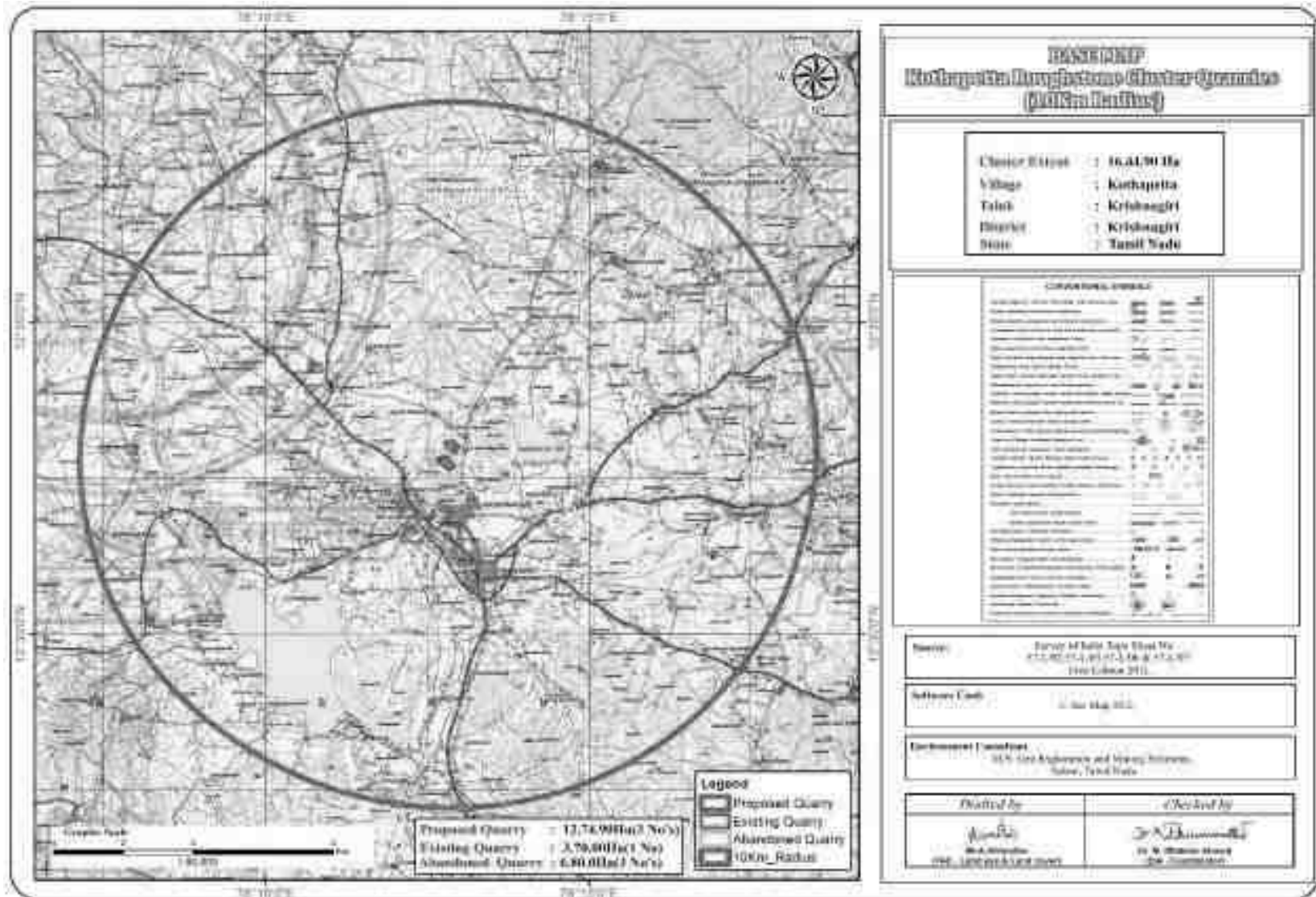
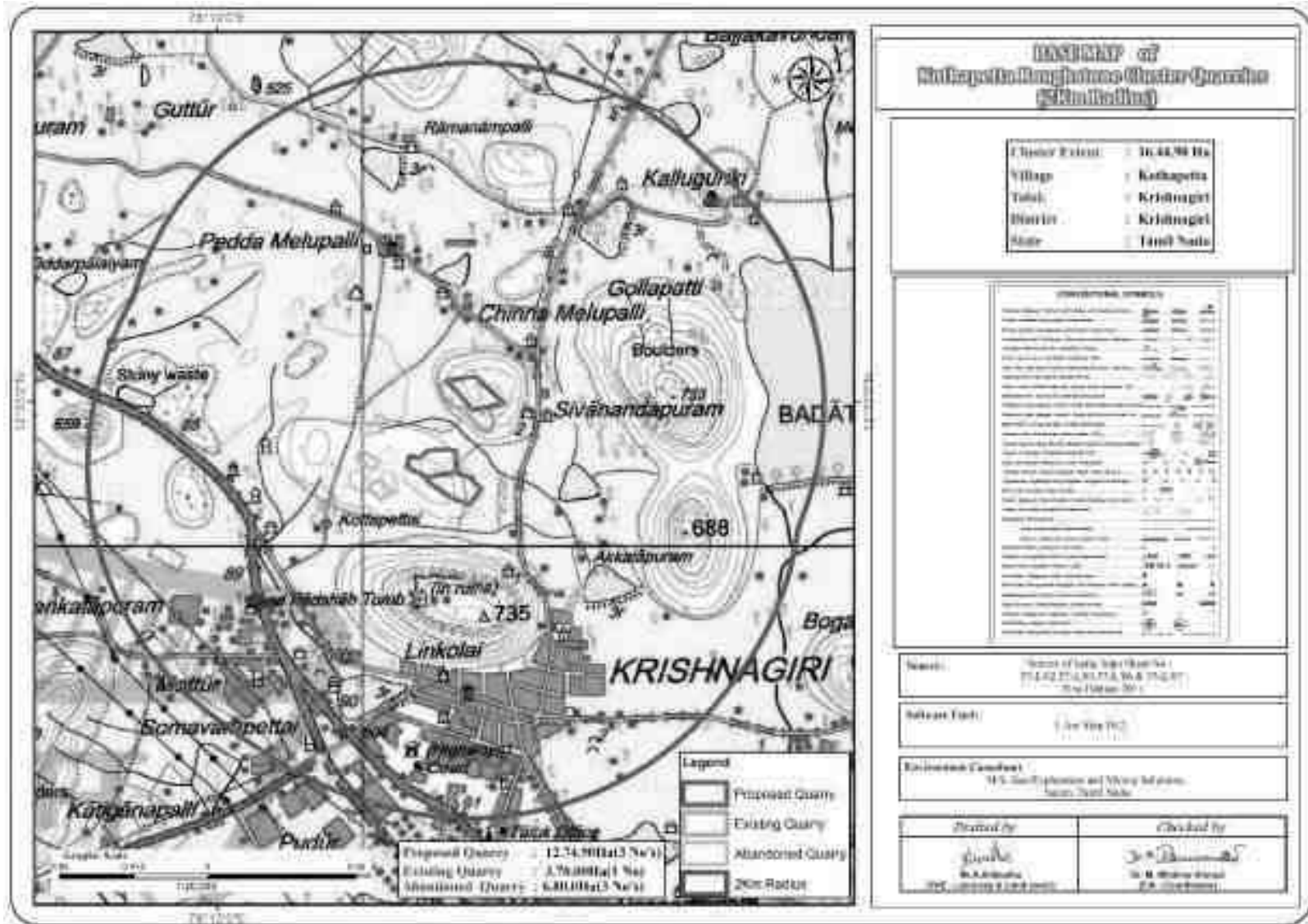


FIGURE 1.4: TOPOSHEET SHOWING LOCATION OF THE PROJECT SITE AROUND 2 KM RADIUS



1.4 Environmental Clearance

The Environmental Clearance process for the project will comprise of four stages. These stages in sequential order are given below: -

1. Screening
2. Scoping
3. Public consultation &
4. Appraisal

SCREENING –

Project – P1 –

- Lease Granted vide Proceeding No 418/2017/Mines Dated 29.12.2017 for five years.
- Mining plan approved by the Deputy Director, Department of Geology and Mining vide Rc. No 418/2017/Mines Dated 31.05.2018
- Environmental Clearance granted at DEIAA – KGI DEIAA vide **Letter No. 35/DEIAA-KGI/Ec.No. 27/2018 Dated 27.02.2018**
- As per G.O (Ms) No 208 Industries (MMC.1) Department Dated 21.09.2020 lease period extended for another five year.
- Scheme of Mining plan prepared for the period of 2023-24 to 2026-27 and got approval vide Roc.No. 1121/2020/Mines Dated 27.01.2023
- Based on the 500m Radius Cluster Letter obtained from the Deputy Director, Department of Geology and Mining, Krishnagiri vide Letter No 1121/2020/Mines Dated 14.02.2023 the proposal falls under Cluster Category “B1”
- Proponent applied for ToR for Environmental Clearance vides online Proposal No. **SIA/TN/MIN/430407/2023, Dated:23.05.2023.**

Project – P2 –

- Lease Granted vide Proceeding No 419/2017/Mines, Dated 30.05.2018- for five years.
- Mining plan approved by the Deputy Director, Department of Geology and Mining, Krishnagiri vide Roc. No 419/2017/Mines Dated 29.12.2017
- Environmental Clearance granted at DEIAA – KGI vide **Letter No. 34/DEIAA-KGI/ Ec. No. 26/2018 Dated 27.02.2018**
- As per G.O (MS) No 208 Industries (MMC.1) Department Dated 21.09.2020 lease period extended for another five year.
- Scheme of Mining plan prepared for the period of 2023-24 to 2027-28 and got approval vide Roc. No. 1120/2020/Mines Dated 27.01.2023
- Based on the 500m Radius Cluster Letter obtained from the Deputy Director, Department of Geology and Mining, Krishnagiri vide Letter No 1120/2020/Mines Dated 14.02.2023 the proposal falls under Cluster Category “B1”

- Proponent applied for ToR for Environmental Clearance vides online Proposal No. **SIA/TN/MIN/430521/2023, Dated:24.06.2023.**

Project – P3–

- The application was processed by the Deputy Director; the precise area communication letter was received from the Deputy Director, Krishnagiri vide **Rc.No. 1314/2023/Minerals Dated:12.10.2023 (Enclosed Annexure – I).** To obtain Approved Mining plan and Environmental Clearance from the State Level Environmental Impact Assessment Authority (SEIAA).
- Mining plan approved by the Deputy Director, Department of Geology and Mining vide Rc.No. 1314/2023/Mines Dated: 10.11.2023.
- Previous Environmental Clearance granted at Lr. No. SEIAA-TN/F.No.3215/EC/1(a)/2645/2015, Dated:05.01.2016
- Based on the 500m Radius Cluster Letter obtained from the Deputy Director, Department of Geology and Mining, Krishnagiri vide Letter No 1314/2023/Mines Dated 22.11.2023 the proposal falls under Cluster Category “B1”
- Proponent applied for ToR for Environmental Clearance vides online Proposal No. **SIA/TN/MIN/456285/2023 dated 21.12.2023.**

SCOPING –**Project – P1**

- The proposal was placed in 407th SEAC meeting held on 07.09.2023 and reply by the proponent dated 14.11.2023. again 430th SEAC meeting held on 14.12.2023 and 439th SEAC meeting held on 10.01.2024 the committee recommended for issue of ToR.
- The proposal was considered in 696th SEIAA meeting held on 14.02.2024 and issued ToR vide **Lr No. SEIAA-TN/F.No.10244/2023/SEAC/ToR- 1681/2024 Dated:14.02.2024.**

Project – P2

- The proposal was placed in 407th SEAC meeting held on 07.09.2023 and 439th SEAC meeting held on 10.01.2024 the committee recommended for issue of ToR.
- The proposal was considered in 658th and SEIAA meeting held on 26.09.2023-27.09.2023 and 696th SEIAA meeting held on 14.02.2024 issued ToR vide **Lr No. SEIAA-TN/F.No.10248/SEAC/ToR-1676/2024 Dated:14.02.2024.**

Project – P3

- The proposal was placed in 441th SEAC meeting held on 31.01.2024 the committee recommended for issue of ToR.
- The proposal was considered in 698th SEIAA meeting held on 02.03.2024 issued **ToR Identification No TO23B0108TN5558418N dated 13.03.2024.**

Public Consultation –

Application to The Member Secretary of the Tamil Nadu Pollution Control Board (TNPCB) to conduct Public Hearing in a systematic, time bound and transparent manner ensuring widest possible public participation at the project site or in its close proximity in the district is submitted along with this Draft EIA/ EMP Report and the outcome of public hearing proceedings will be detailed in the Final EIA/EMP Report.

Appraisal

Appraisal is the detailed scrutiny by the State Expert Appraisal Committee (SEAC) of the application and other documents like the final EIA & EMP Report, outcome of the Public Consultations including Public Hearing Proceedings, submitted by the proponent to the regulatory authority concerned for grant of environmental clearance.

The report has been prepared using the following references:

- Guidance Manual of Environmental Impact Assessment for Mining of Minerals, Ministry of Environment and Forests, 2010
- EIA Notification, 14th September, 2006
- ToR vide SEIAA-TN/F.No.10244/2023/SEAC/ToR- 1681/2024 Dated:14.02.2024- P1
- ToR vide SEIAA-TN/F.No.10248/SEAC/ToR-1676/2024 Dated:14.02.2024- P2
- ToR Identification No TO23B0108TN5558418N dated 13.03.2024 -P3

Approved Mining of P1 to P3 the Rough Stone quarry projects

1.5 Post Environment Clearance Monitoring

The Project Proponents in the Cluster will submit a half-yearly compliance report in respect of stipulated Environmental Clearance terms and conditions to MoEF & CC Regional Office & SEIAA after grant of EC on 1st June and 1st December of every year.

1.6 Generic Structure of EIA Document

The overall contents of the EIA report follow the list of contents prescribed in the EIA Notification 2006 and the “Environmental Impact Assessment Guidance Manual for Mining of Minerals” published by MoEF & CC. A brief description of each Chapter is presented in Table No. 1.5.

TABLE 1.5 – STRUCTURE OF THE EIA REPORT

S. No	Chapters	Title	Particulars
1	Chapter 1	Introduction	Presents, an Introduction along with Scope and Objective of this EIA/EMP Studies
2	Chapter 2	Project Description	Presents the Technical Details of the Project
3	Chapter 3	Description of Environment	Presents the Baseline Status for various Environmental Parameters in the Study Area for One Season (3 Months)
4	Chapter 4	Anticipated Environmental Impacts and Mitigation Measures	Presents the Identification, Prediction and Evaluation of overall Environmental Impacts due to the Proposed Projects Activities. Also presents Proposed Mitigation Measures.

5	Chapter 5	Analysis of Alternatives (Technology & Site)	Presents Analysis of alternatives with respect to site
6	Chapter 6	Environment Monitoring Programme	Present details of post project environment monitoring
7	Chapter 7	Additional Studies	Presents Public Consultation, Risk Assessment and Disaster Management Plan
8	Chapter 8	Project Benefits	Presents project benefits as: Improvements in the Physical Infrastructure, Social Infrastructure Employment Potential –Skilled; Semi-Skilled and Unskilled etc.,
9	Chapter 9	Cost Benefit Analysis	Environmental Cost Benefit Analysis has not been recommended at Scoping Stage – thus no analysis carried out separately in this EIA/EMP Report.
10	Chapter 10	Environmental Management Plan	Description of the administrative aspects to ensure the Mitigation Measures are implemented and their effectiveness monitored, after approval of the project.
11	Chapter 11	Summary & Conclusion	Summary of the EIA Report
12	Chapter 12	Disclosure of Consultants Engaged	Disclosure of the Consultants

1.7 Scope of the Study

The main scope of the EIA study is to quantify the cumulative impact in the study area due to cluster quarries and formulate the effective mitigation measures for each individual leases. A detailed account of the emission sources, emissions control equipment, background Air quality levels, Meteorological measurements, Dispersion model and all other aspects of pollution like effluent discharge, Dust generation etc., have been discussed in this report. The baseline monitoring study has been carried out during the Post monsoon season (**Oct – Dec 2023**) for various environmental components so as to assess the anticipated impacts of the cluster quarry projects on the environment and suggest suitable mitigation measures for likely adverse impacts due to the proposed project.

TABLE 1.6 – ENVIRONMENT ATTRIBUTES

Sl.No.	Attributes	Parameters	Source and Frequency
1	Ambient Air Quality	PM ₁₀ , PM _{2.5} , SO ₂ , NO ₂	24 hourly samples twice a week for three months at 7 locations
2	Meteorology	Wind speed and direction, temperature, relative humidity and rainfall	Near project site continuous for three months with hourly recording and from secondary sources of IMD station, Krishnagiri
3	Water quality	Physical, Chemical and Bacteriological parameters	Grab samples were collected at 4 ground water and 2 surface water locations once during study period.
4	Ecology	Existing terrestrial and aquatic flora and fauna within 10 km radius circle.	Limited primary survey and secondary data was collected from the Forest department.

5	Noise levels	Noise levels in dB(A)	At 7 locations data monitored once for 24 hours during EIA study.
6	Soil Characteristics	Physical and Chemical Parameters	Once at 6 locations during study period
7	Land use	Existing land use for different categories	Based on Survey of India topographical sheet and satellite imagery and primary survey.
8	Socio-Economic Aspects	Socio-economic and demographic characteristics, worker characteristics	Based on primary survey and secondary sources data like census of India 2011.
9	Hydrology	Drainage pattern of the area, nature of streams, aquifer characteristics, recharge and discharge areas	Based on data collected from secondary sources as well as hydro-geology study report prepared.
10	Risk assessment and Disaster Management Plan	Identify areas where disaster can occur by fires and explosions and release of toxic substances	Based on the findings of Risk assessment done for the mining associated activities

Source: Field Monitoring Data

The data has been collected as per the requirement of the ToR issued by SEIAA – TN and Standard ToR Published by MoEF & CC.

1.7.1 Regulatory Compliance & Applicable Laws/Regulations

- Application for Quarrying Lease as per Tamil Nadu Minor Mineral Concession Rules, 1959
- Obtained Precise Area Communication Letter as per Tamil Nadu Minor Mineral Concession Rules, 1959 for Preparation of Mining Plan and obtaining Environmental Clearance
- The Mining Plan of Rough Stone quarry has been approved under Rule 41 & 42 as amended of Tamil Nadu Minor Mineral Concession Rules, 1959
 - ToR vide **SEIAA-TN/F.No.10244/2023/SEAC/ToR- 1681/2024 Dated:14.02.2024- P1**
 - ToR vide **SEIAA-TN/F.No.10248/SEAC/ToR-1676/2024 Dated:14.02.2024- P2**
 - ToR Identification No **TO23B0108TN5558418N dated: 13.03.2024 -P3**

Approved Mining of P1 to P3 the Rough Stone quarry projects.

CHAPTER – 2: PROJECT DESCRIPTION

2.0 General

The Proposed Rough Stone Quarries requires Environmental Clearance. There are two proposed quarries forming a cluster; calculated as per MoEF & CC Notification S.O. 2269(E) Dated 1st July 2016 and the total extent of cluster is 16.44.9 ha.

As the extent of cluster are more than 5 ha, the proposal falls under B1 Category as per the Order Dated: 04.09.2018 & 13.09.2018 passed by Hon'ble National Green Tribunal, New Delhi in O.A. No. 173 of 2018 & O.A. No, 186 of 2016 and MoEF & CC Office Memorandum F. No. L-11011/175/2018-IA-II (M) Dated: 12.12.2018, and requirement for EIA, EMP and Public Consultation for obtaining Environmental Clearance.

2.1 Description of the Project

The proposed projects are site specific and there is no additional area required for this project. There is no effluent generation/discharge from the proposed quarries.

Method is mining is common for all the proposed quarries in the cluster. Rough Stone quarries are proposed to be excavated by opencast mechanized method involving splitting of rock mass of considerable volume from the parent rock mass by jackhammer drilling and blasting, hydraulic excavators are used for loading the Rough Stone quarry from pithead to the needy crushers and rock breakers to avoid secondary blasting.

2.2 Location of the Project

- The Cluster quarries are located in Kothapetta village, Krishnagiri taluk, Krishnagiri District, Tamil Nadu State.
- The project falls in Toposheet No: 57 L/2. The cluster areas fall in the Latitude between 12°32'44.51"N to 12°32'49.86"N and Longitude between 78°12'42.92"E to 78°12'49.39"E.
- The projects under the cluster are classified as Poramboke land (Non-Forest Land) & does not fall within 10 km radius of any Eco – sensitive zone, Wild life Sanctuary, National Park, Tiger Reserve, Elephant Corridor and Biosphere Reserves.

TABLE 2.1: SITE CONNECTIVITY TO THE CLUSTER QUARRIES

Nearest Roadway	NH44- Salem – Krishnagiri-Bangaluru - 1km-W SH225-Krishnagiri – Rayakottai Road –2.0km-SW
Nearest Village	Chinnimalpalli 635m-NE
Nearest Town	Krishnagiri – 2.0Km – S
Nearest Railway	Rayakottai Railwaystation – 20km-SW
Nearest Airport	Bangalore HAL Airport – 73Km - NW

Source: Google image, Survey of India Toposheet

The cluster quarries coners coordinates are given below.

TABLE 2.2 – BOUNDARY CO-ORDINATES OF PROPOSED PROJECTS

BOUNDARY CO-ORDINATES OF PROJECT – P1		
Corner Nos.	Latitude	Longitude
1	12° 32' 46.6000" N	78° 12' 39.2801" E
2	12° 32' 48.8528" N	78° 12' 39.6948" E
3	12° 32' 48.3689" N	78° 12' 41.7620" E
4	12° 32' 50.0523" N	78° 12' 43.6128" E
5	12° 32' 50.2884" N	78° 12' 47.4781" E
6	12° 32' 49.8798" N	78° 12' 49.4269" E

7	12° 32'45.4896"N	78° 12'49.4142"E
8	12° 32'44.5047"N	78° 12'42.8808"E
9	12° 32'45.6814"N	78° 12'41.7387"E
10	12° 32'45.4109"N	78° 12'41.5005"E
BOUNDARY CO-ORDINATES OF PROJECT – P2		
Corner Nos.	Latitude	Longitude
1	12° 32'44.4928"N	78° 12'42.8804"E
2	12° 32'45.4810"N	78° 12'49.4133"E
3	12° 32'44.2270"N	78° 12'52.8283"E
4	12° 32'43.6148"N	78° 12'53.0655"E
5	12° 32'42.0172"N	78° 12'54.6408"E
6	12° 32'38.8787"N	78° 12'52.1976"E
7	12° 32'39.4415"N	78° 12'50.1237"E
8	12° 32'40.3676"N	78° 12'48.3030"E
9	12° 32'42.7286"N	78° 12'44.5945"E
BOUNDARY CO-ORDINATES OF PROJECT – P3		
Corner Nos.	Latitude	Longitude
1	12° 32'58.37"N	78° 12'52.97"E
2	12° 33'04.48"N	78° 12'47.51"E
3	12° 33'04.86"N	78° 12'50.13"E
4	12° 33'05.33"N	78° 12'53.41"E
5	12° 32'59.76"N	78° 12'59.44"E
6	12° 32'59.07"N	78° 12'56.20"E

Source: Scheme of Mine Lease Plan Plate of the respective proposals

FIGURE 2.1: TOPOGRAPHICAL VIEW OF THE PROJECT SITE-P1



FIGURE 2.2: TOPOGRAPHICAL VIEW OF THE PROJECT SITE-P2



FIGURE 2.3: FENCING PHOTOGRAPHS OF THE PROJECT SITE-P1



FIGURE 2.4: FENCING PHOTOGRAPHS OF THE PROJECT SITE-P2



FIGURE 2.5: FENCING PHOTOGRAPHS OF THE PROJECT SITE-P3





SATELLITE IMAGERY OF P3

FIGURE 2.7: QUARRY LEASE PLAN-P1

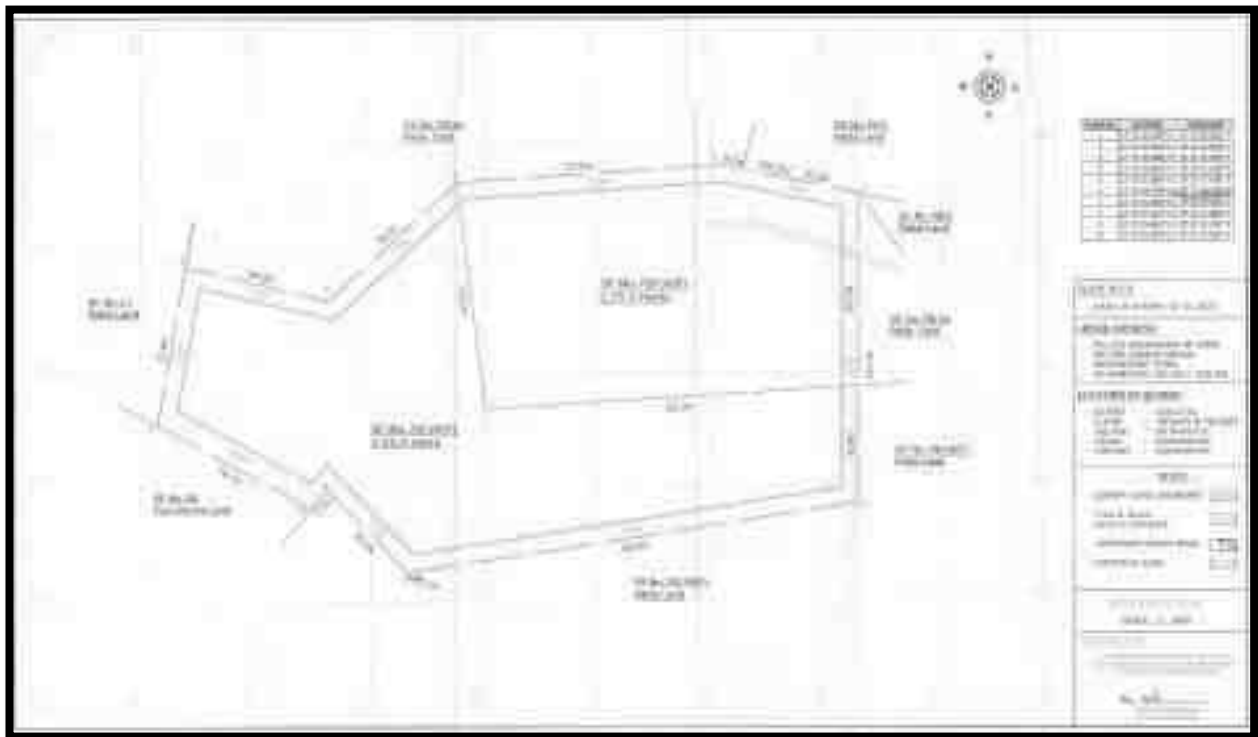


FIGURE 2.8: QUARRY LEASE PLAN-P2

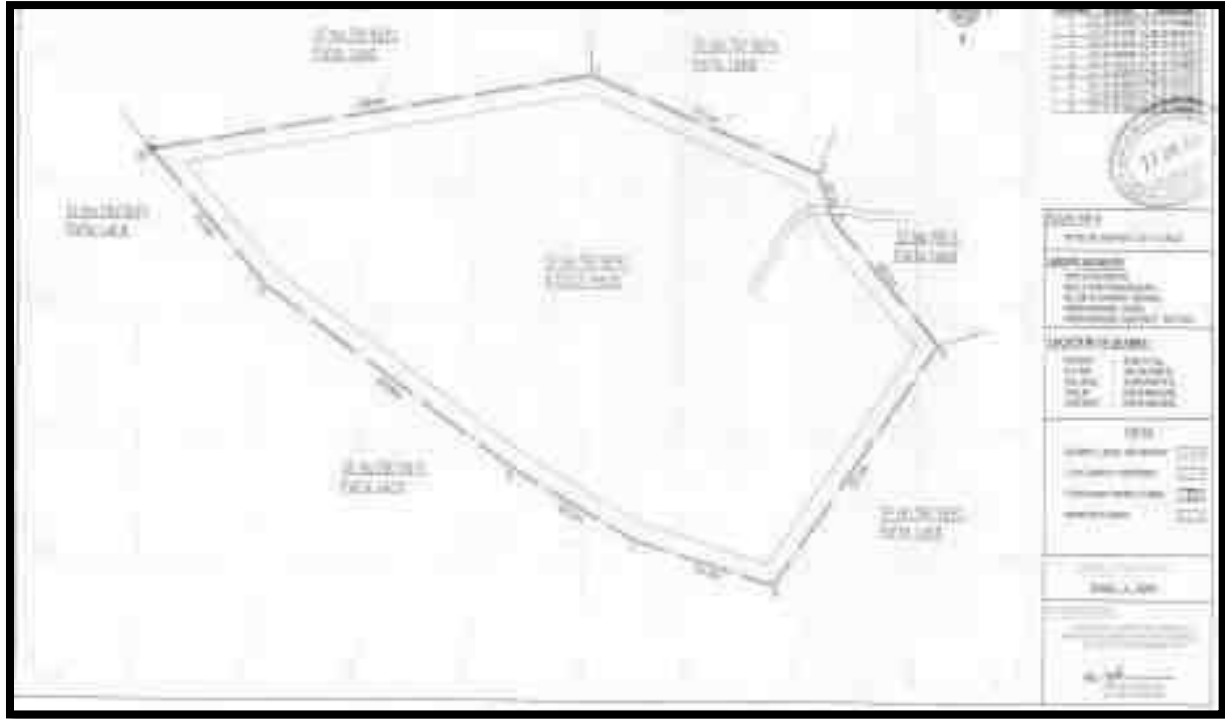


FIGURE 2.9: SURFACE & GEOLOGICAL PLAN-P3

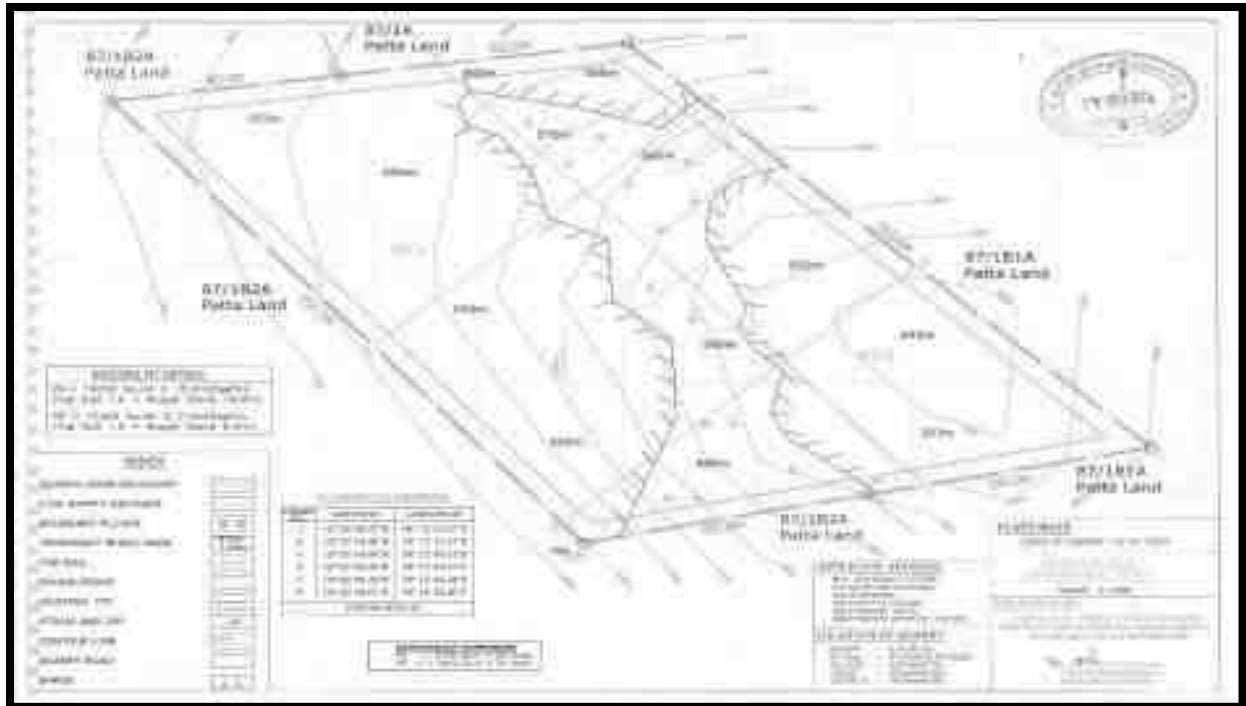


FIGURE 2.10: VILLAGE MAP SUPERIMPOSED ON GOOGLE EARTH IMAGE

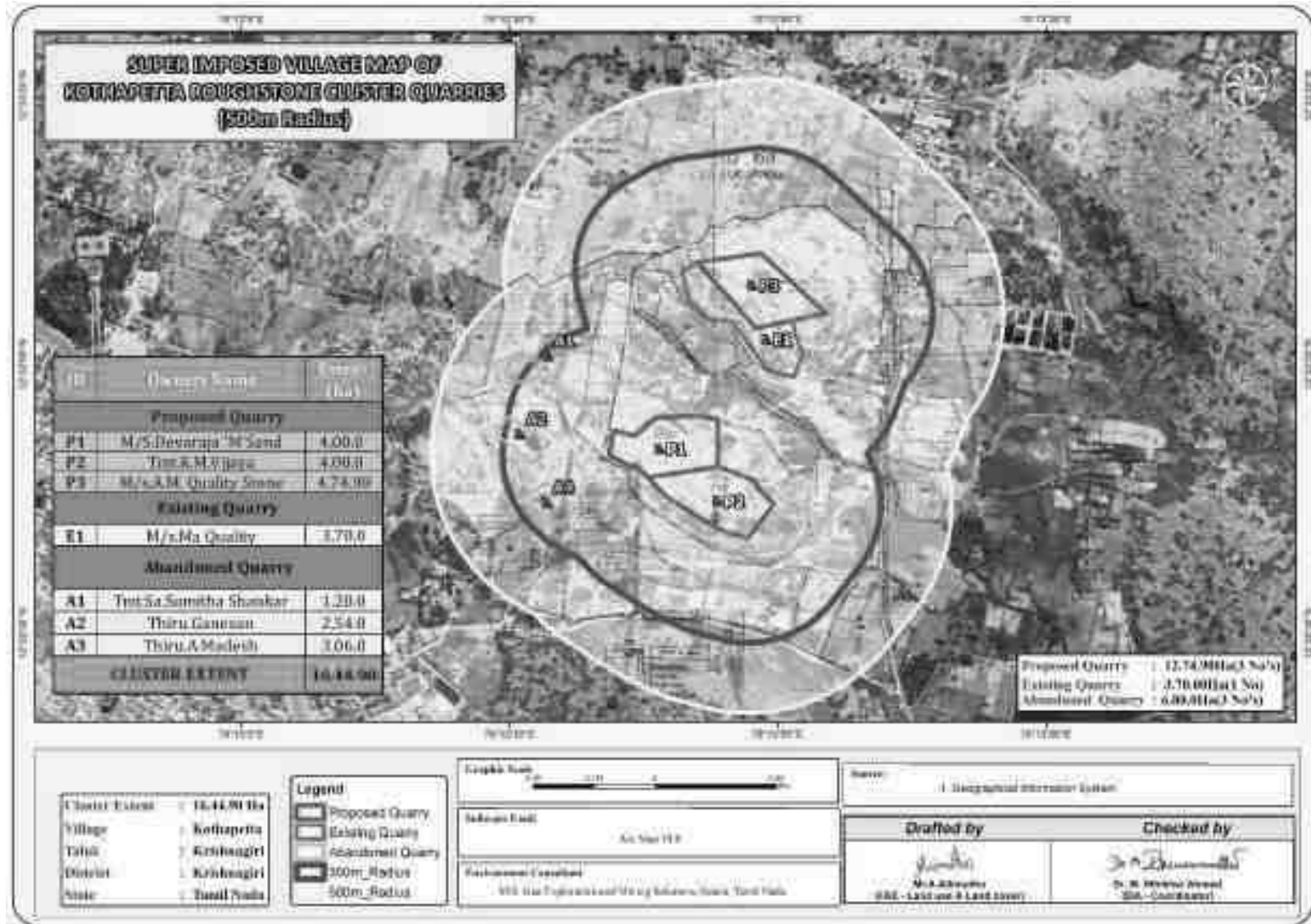


FIGURE 2.11: DIGITIZED MAP OF THE STUDY AREA (10 KM RADIUS FROM PROJECT SITE)

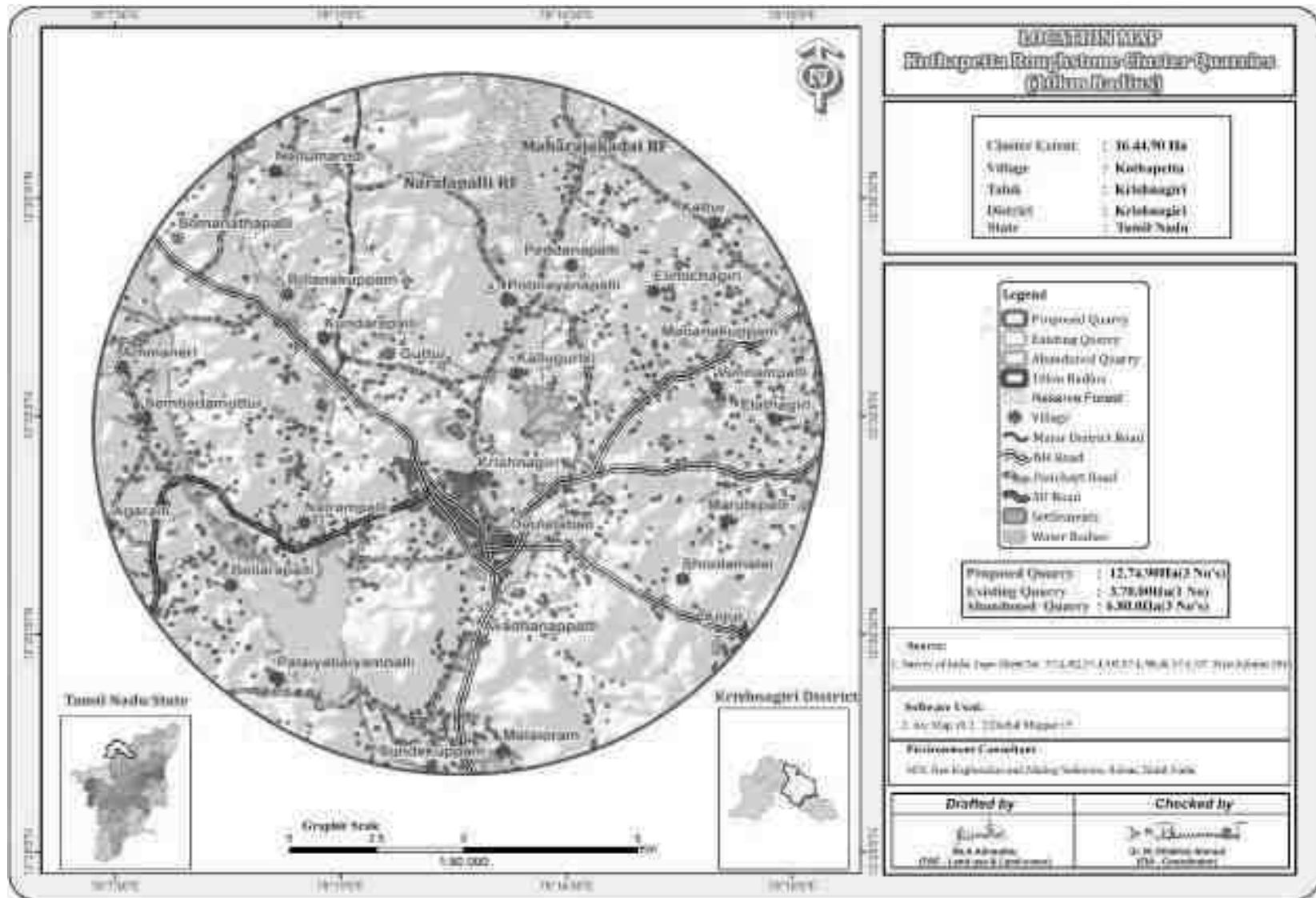


FIGURE 2.12: DIGITIZED MAP OF THE STUDY AREA (5 KM RADIUS FROM PROJECT SITE)

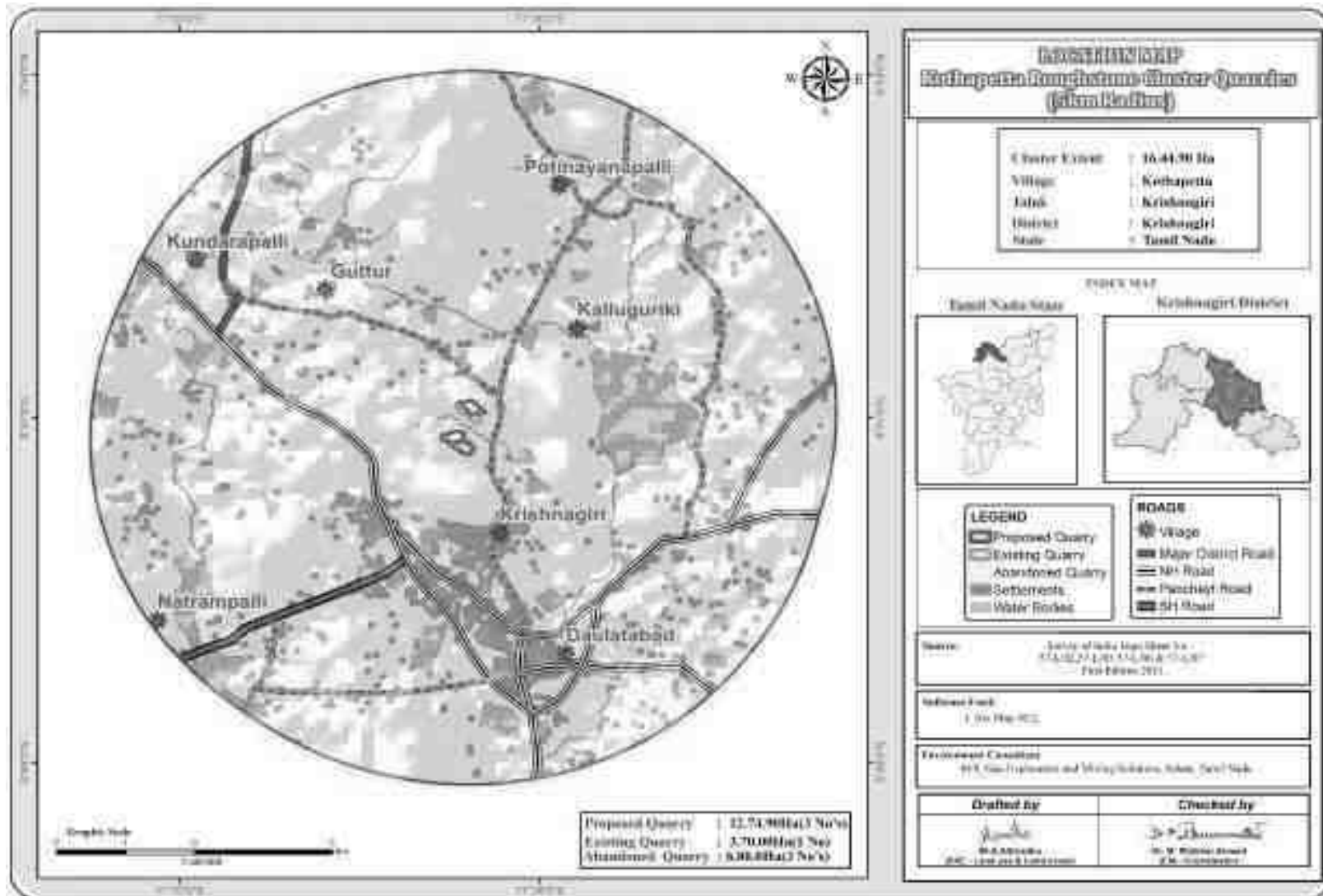
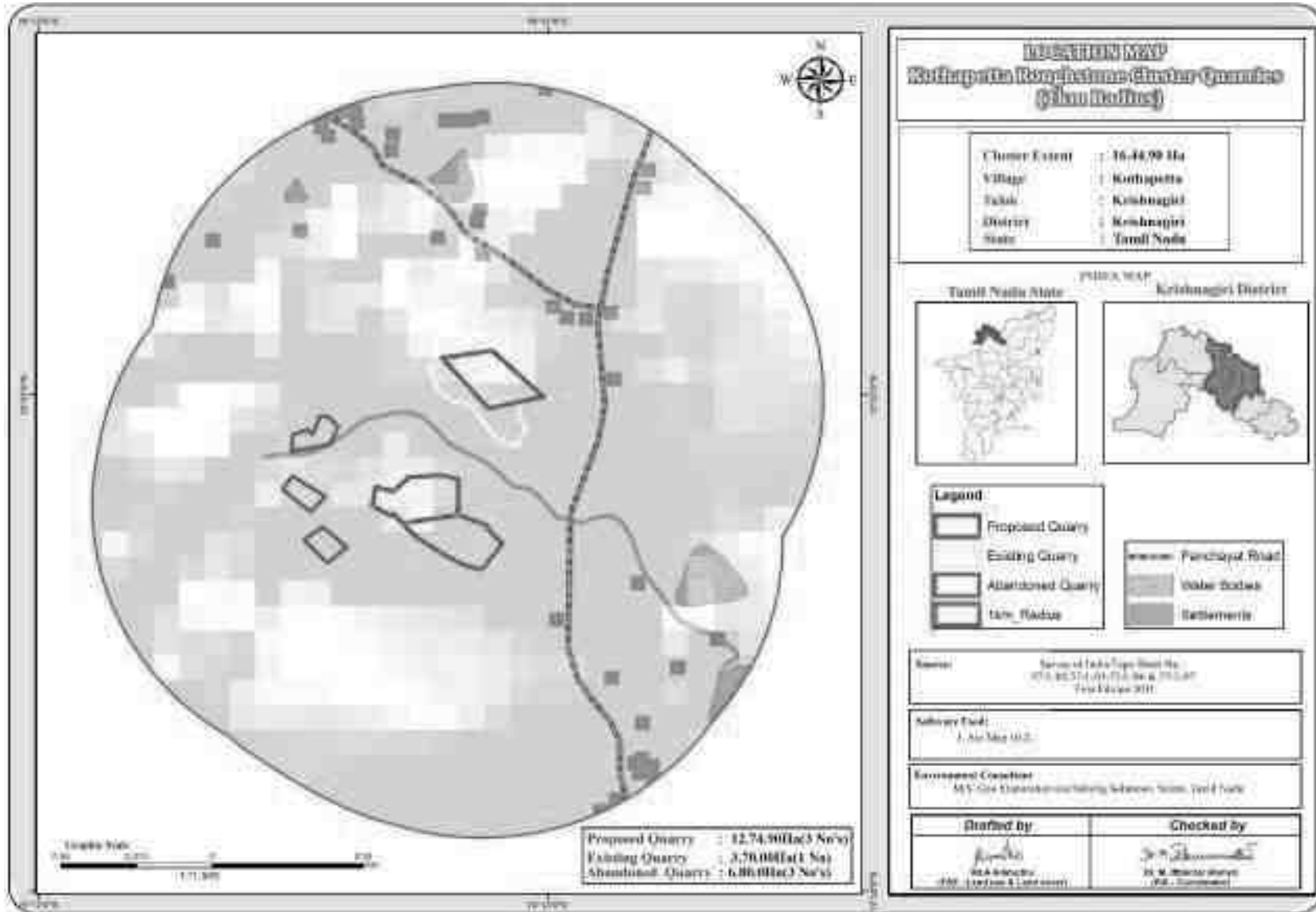


FIGURE 2.13: DIGITIZED MAP OF THE STUDY AREA (1 KM RADIUS FROM PROJECT SITE)



2.2.1 Project Area

- (i) All the projects under cluster are site specific, there is No beneficiation or processing proposed inside the project area.
- (ii) There is no forest land involved in the proposed project area and is devoid of major vegetation and trees.

TABLE 2.3 – LAND USE PATTERN OF THE PROPOSED PROJECTS (P1-P3)

P1		
Description	Present area (Ha)	Area at the end of this quarrying period (Ha)
Quarrying Pit	2.50.0	3.42.0
Infrastructure	Nil	0.01.0
Roads	0.01.0	0.01.0
Green Belt & Dump	0.01.0	0.56.0
Unutilized Area	1.48.0	Nil
Grand Total	4.00.0	4.00.0
P2		
Description	Present area (Ha)	Area at the end of this quarrying period (Ha)
Quarrying Pit	1.39.0	3.42.0
Infrastructure	Nil	0.01.0
Roads	0.01.0	0.01.0
Green Belt & Dump	0.01.0	0.56.0
Unutilized Area	2.59.0	Nil
Grand Total	4.00.0	4.00.0
P3		
Description	Present area (Ha)	Area required during the quarrying period (Ha)
Area under quarrying	3.00.00	3.32.00
Infrastructure	Nil	0.01.00
Roads	0.01.00	0.01.00
Green Belt & Dump	Nil	1.40.90
Unutilized Area	1.73.90	Nil
Grand Total	4.74.90	4.74.90

Source: Approved SOM and Mining Plan.

2.2.2 Size or Magnitude of Operation

TABLE 2.4: OPERATIONAL DETAILS FOR PROPOSED PROJECTS

OPERATIONAL DETAILS FOR PROJECT – P1				
PARTICULARS	DETAILS			
	Rough Stone quarry (m³) (Volume)	Rough Stone quarry (95%) (m³) (5Year Plan period)	Mine waste in (m³)) 5%	Gravel (m³) (1 Years Plan period)
Geological Resources	10,85,740 m ³	1,031,457	54,283	2,329m ³
Mineable Reserves	5,13,365m ³	4,87,698	25,667	799m ³
Production for Next five-year plan period	5,13,365 m ³	4,87,698	25,667	799 m ³
Scheme of Mining Plan Period / Lease Applied Period	5 Years			

Number of Working Days	300 Days			
Production per day	342	325	17	3
No of Lorry loads (12m ³ per load)	29	27	1	1
Total Depth of Mining	41m (1m Gravel +40m Rough stone)			
OPERATIONAL DETAILS FOR PROJECT – P2				
PARTICULARS	DETAILS			
	Rough Stone quarry (m³) (Volume)	Rough Stone quarry (95%) (m³) (5Year Plan period)	Mine waste in (m³) 5%	Gravel (m³) (1 Years Plan period)
Geological Resources	16,04,820 m ³	15,24,579	80,241	22,960
Mineable Reserves	9,68,575m ³	9,20,148	48,427	20,711
Production for Next five years Plan	7,93,205 m ³	7,53.546	39,659	20,711
Mining Plan Period / Lease Applied Period	5 Years			
Number of Working Days	300 Days			
Production per day	529	502	26	69
No of Lorry loads (12m ³ per load)	44	42	2	6
Total Depth of mining	31m (1m Topsoil +30m Rough stone)			
OPERATIONAL DETAILS FOR PROJECT – P3				
PARTICULARS	DETAILS			
	Rough Stone quarry (m³) (Volume)	Recoverable Roughstone quarry in m3 (100%)	Topsoil (m³)	
Geological Resources	8,11,453m ³	8,11,453m ³	9,469m ³	
Mineable Reserves	4,81,920m ³	4,81,920m ³	8,706 m ³	
Production for Next five years Plan	4,81,920m ³	4,81,920m ³	8,706 m ³	
Mining Plan Period / Lease Applied Period	5 Years			
Number of Working Days	300 Days			
Production per day	321	321	29	
No of Lorry loads (12m ³ per load)	27	27	2-3	
Total Depth of mining	45 (1m Topsoil +44m Roughstone)			

Source: Approved SOM mining plan, Approved Mining Plan

* Topsoil formation are proposed to excavate for first year only

2.3 GEOLOGY

2.3.1 Geology of the Area:

The lease area is slightly elevated topography, the area has been quarrying operation earlier Roughstone exposures are clearly visible in existing pit within the lease applied area. Gravel is noticed at the average thickness of 1m. the slope is gentle towards North Eastern side. The altitude of the area is above 537m from MSL.

Peninsular gneiss forms the oldest rock formations, in which the massive formation of charnockite lies over with rich accumulation of recent quaternary formations. On regional scale the charnockite body trends NE-SW with dipping towards SE70°

The general geological sequences of the rocks in this area are given below:

AGE	FORMATION
Recent	- Quaternary formation (Gravel)
-----Unconformity-----	
Archaean	- Charnockite Peninsular Gneiss complex

2.3.3 Hydrogeology

The origin, occurrence and movement of groundwater are controlled by geological setup of a terrain. During the study it is inferred that the entire cluster area is a Hard rock terrain and the low -resistance encountered at the depth between 65-70 m bgl, hence it is assumed that the possibility of Ground water occurrence will be below this level and it also proved that this hard batholith above 60 m will not encounter any subsurface water.

In the geophysical study it has been clearly inferred that the depth of the quarrying operation will not intersect the ground water table.

TABLE 2.5: GROUND WATER LEVEL VARIATIONS OF KRISHNAGIRI DISTRICT

Jan 2017	May 2017	Jan 2018	May 2018	Jan 2019	May 2019	Jan 2020	May 2020	Jan 2021	May 2021	5 Years Pre-Monsoon Average	5Years Post Monsoon Average
12.1	14.9	6.3	8.1	11.0	12.7	8.9	11	8.4	10.6	9.5	7.9

Source: <https://www.twadboard.tn.gov.in/content/Krishnagiri>

FIGURE 2.14: REGIONAL GEOLOGY MAP

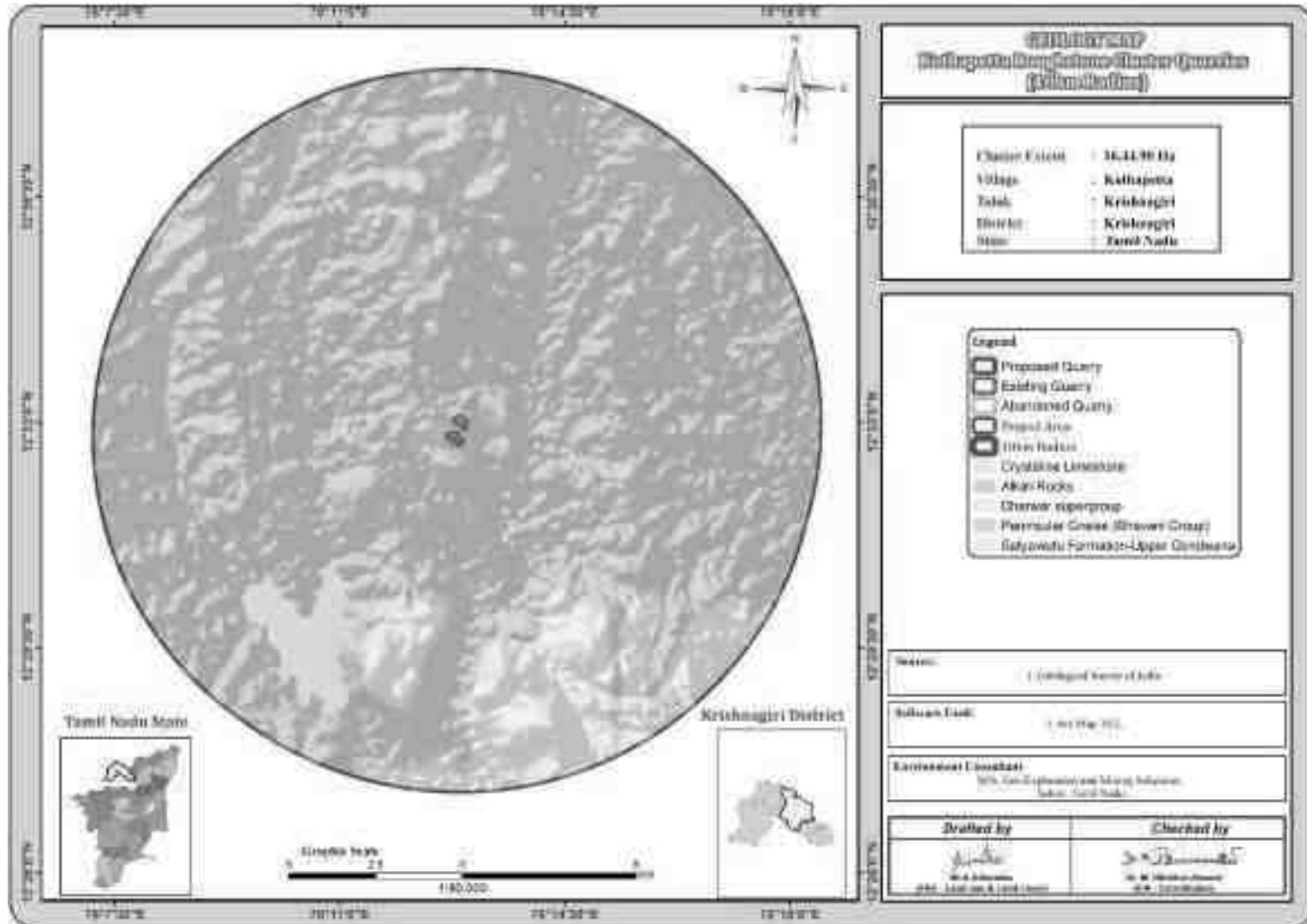


FIGURE 2.15: GEOMORPHOLOGY MAP

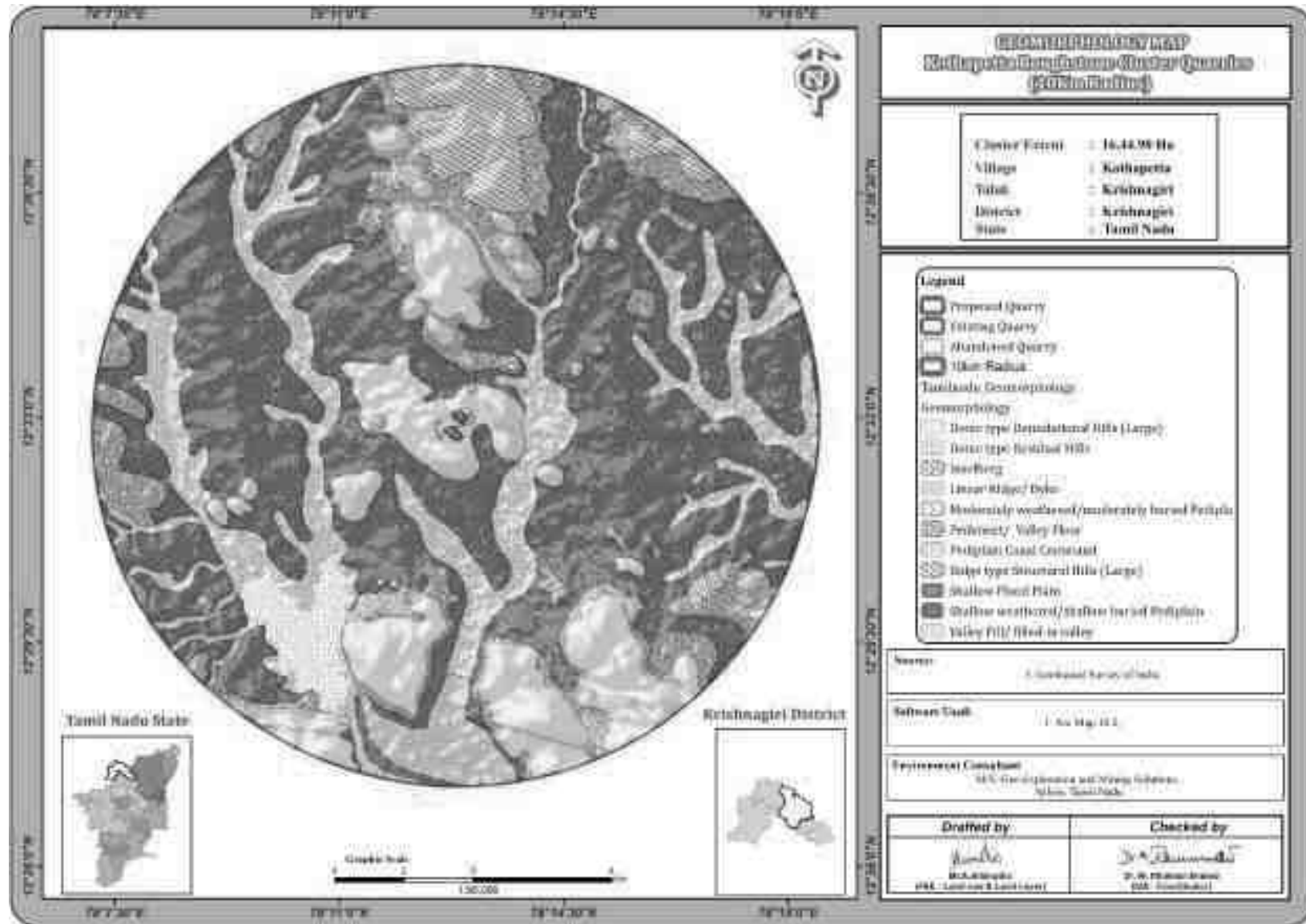


FIGURE 2.16: YEARWISE DEVELOPMENT PRODUCTION PLAN AND SECTION -P1

M/s. Sri Devaraajaa 'M' Sand – P1

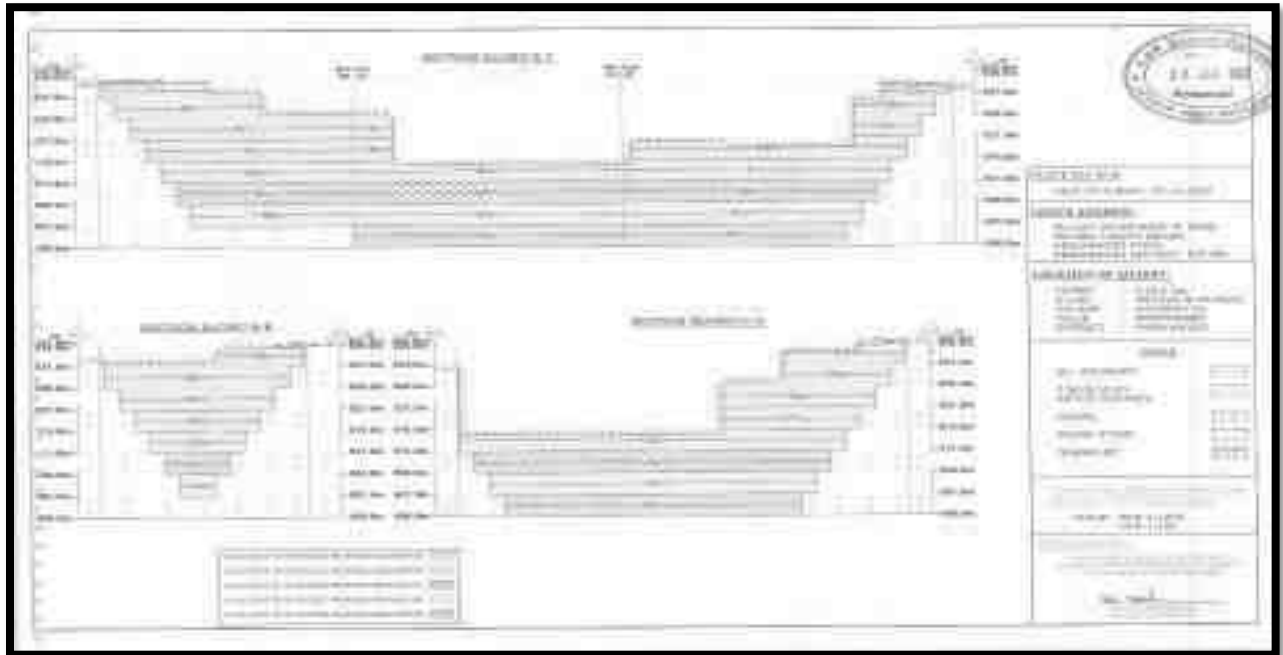
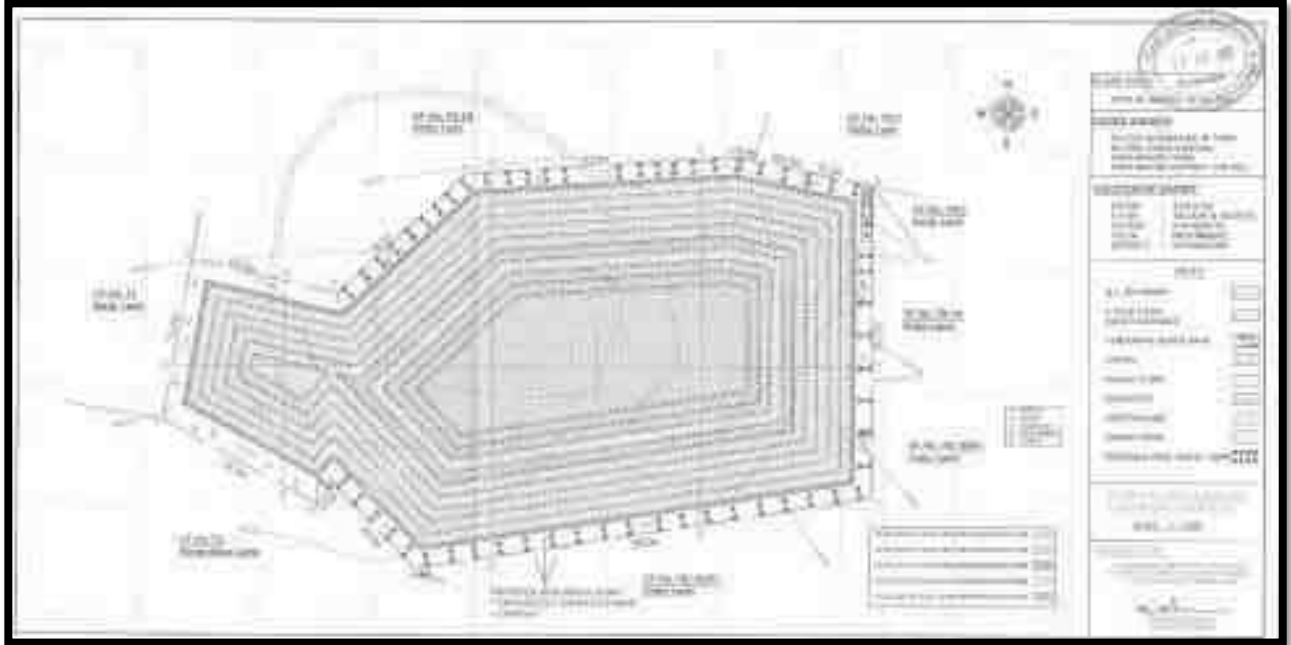


FIGURE 2.17: YEARWISE DEVELOPMENT PRODUCTION PLAN AND SECTION -P2
Tmt.K.M.Vijaya -P2

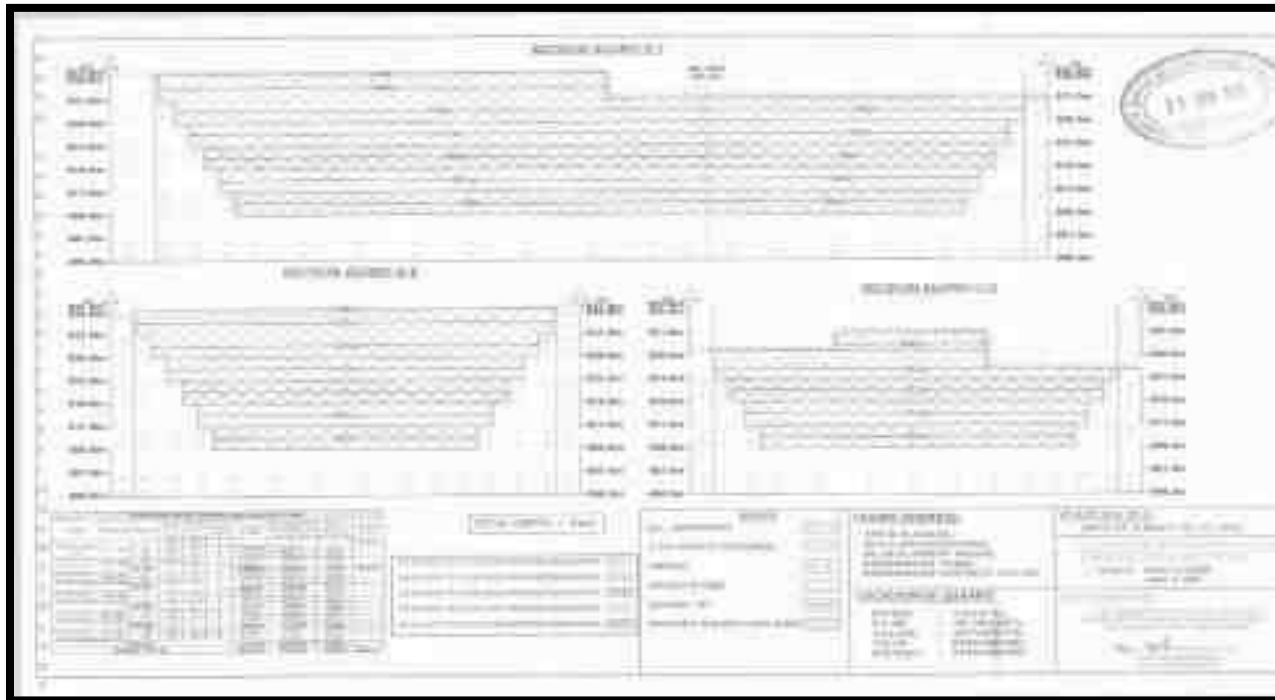
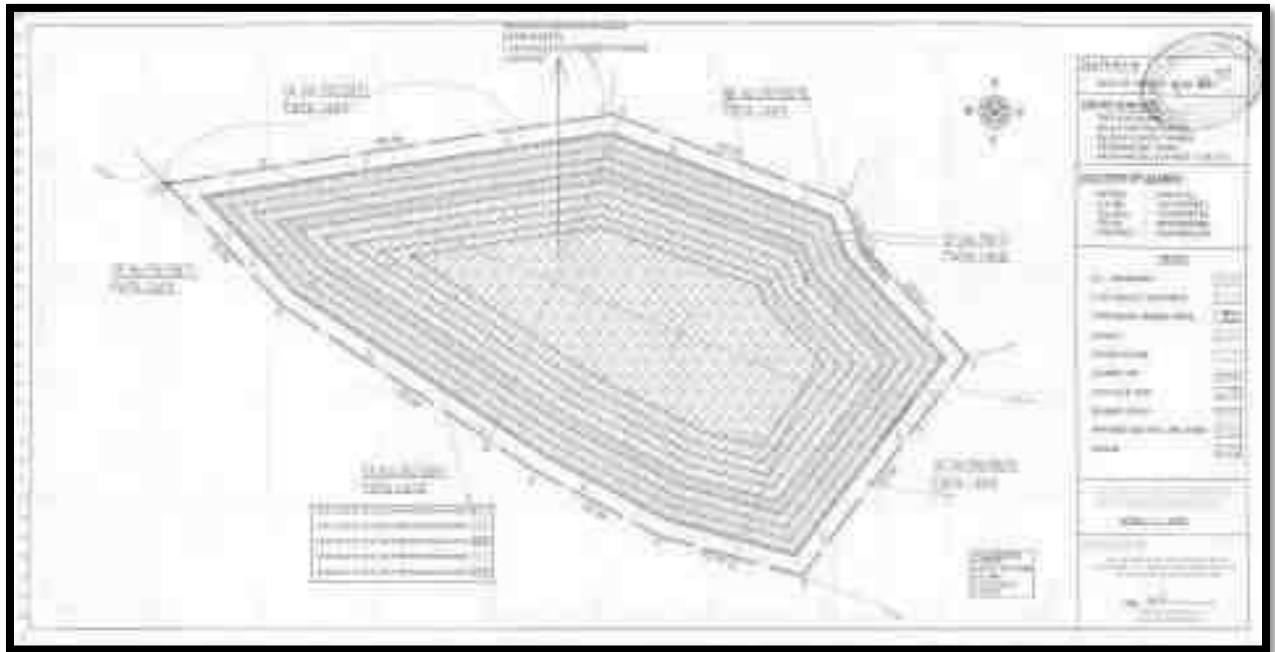
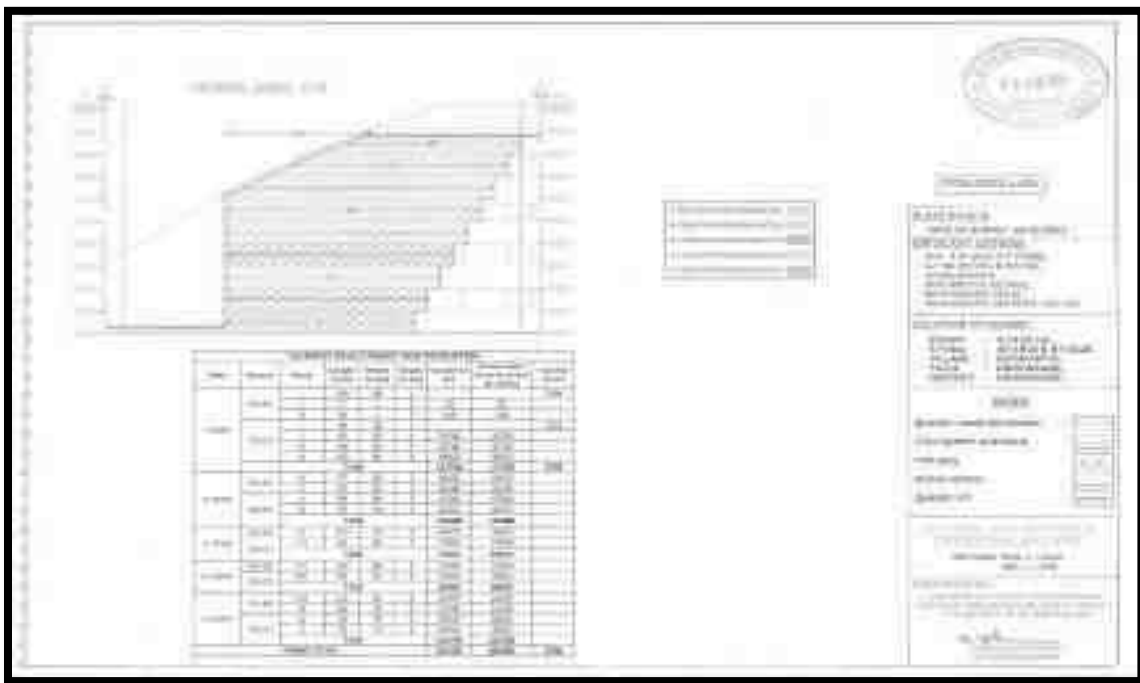
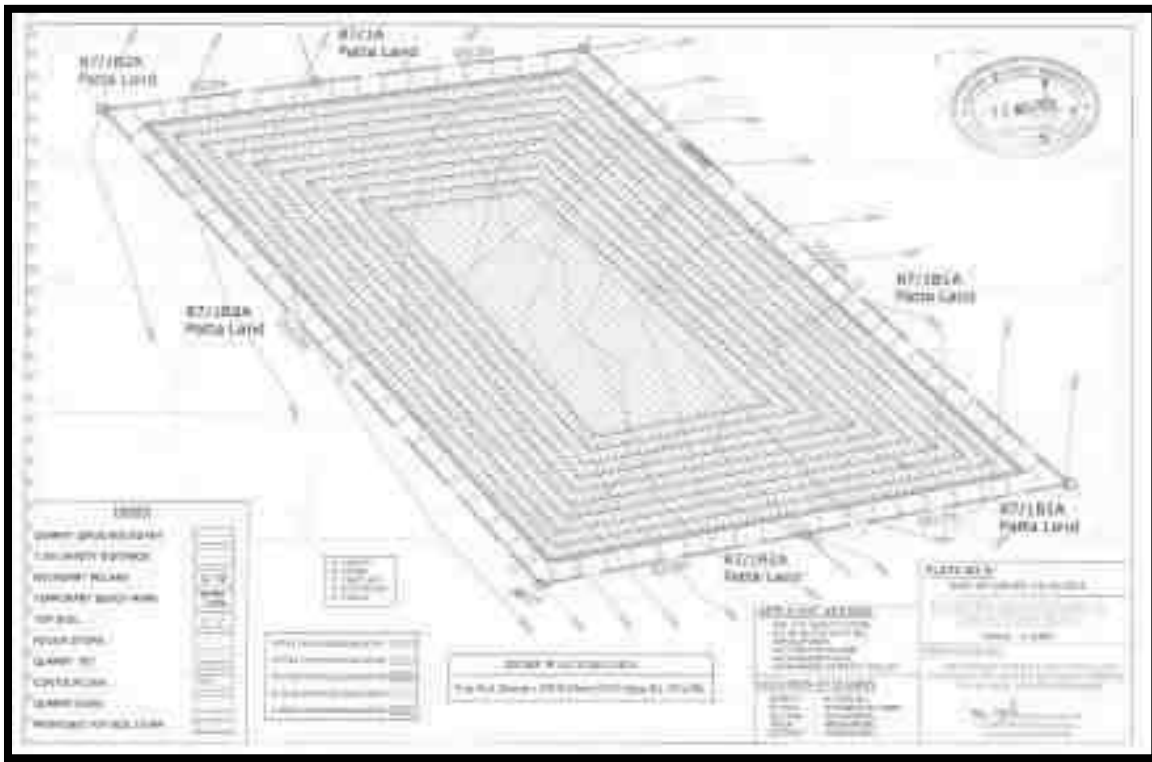


FIGURE 2.18: YEARWISE DEVELOPMENT PRODUCTION PLAN AND SECTION -P3
M/s. A.M. Quality Stone-P3



2.4 RESOURCES AND RESERVES

The Resources and Reserves of Rough Stone quarry were calculated based on Cross-Section Method by plotting sections to cover the maximum lease area.

Based on the availability of Geological Resources the Mineable Reserves are calculated by considering excavation system of bench formation and leaving essential safety distance of 7.5 m (Safety Barrier all around the applied area) and safety distance as per precise area communication letter and deducting the locked up reserves during bench formation (Also called as Bench Loss) and the Mineable Reserves is calculated considering there is no waste / overburden / side burden (100% Recovery Anticipated).

TABLE 2.6: AVAILABLE GEOLOGICAL RESOURCES OF PROPOSED PROJECTS- P1, P2 & P3

PARTICULARS	P1			
	Rough Stone quarry (m ³) (Volume)	Rough Stone quarry (95%) (m ³) (5Year Plan period)	Mine waste in (m ³) 5%	Gravel (m ³) (1 Years Plan period)
Geological Resources	10,85,740 m ³	1,031,457	54,283	2,329m ³
Mineable Reserves	5,13,365m ³	4,87,698	25,667	799m ³
Production for Next five-year plan period	5,13,365 m ³	4,87,698	25,667	799 m ³

PARTICULARS	P2			
	Rough Stone quarry (m ³) (Volume)	Rough Stone quarry (m ³) @ (95%) (5Year Plan period)	Mine waste in (m ³) 5%	Gravel (m ³) (1 Years Plan period)
Geological Resources	16,04,820 m ³	15,24,579	80,241	22,960
Mineable Reserves	9,68,575m ³	9,20,148	48,427	20,711
Production for Next five years Plan	7,93,205 m ³	7,53.546	39,659	20,711

PARTICULARS	P3		
	Rough Stone quarry (m ³) (Volume)	Recoverable Rough Stone quarry in (m ³) @ (100%)	Topsoil (m ³)
Geological Resources	8,11,453m ³	8,11,453m ³	9,469m ³
Mineable Reserves	4,81,920m ³	4,81,920m ³	8,706 m ³
Production for five years Plan	4,81,920m ³	4,81,920m ³	8,706 m ³

Source: Approved scheme of Mining Plan and Approved mining plan

TABLE 2.7: YEAR-WISE PROPOSAL FOR NEXT FIVE YEARS PRODUCTION PLAN-P1

YEAR	ROUGH STONE QUARRY (m ³)	RECOVERABLE RESERVES IN (m ³) @ 95%	MINE WASTE IN (m ³) 5%	GRAVEL (m ³)
I	1,26,165	1,19,857	6308	799
II	1,18,950	1,13,003	5947	-
III	1,03,600	98,420	5180	-
IV	89,250	84,788	4462	-
V	75,400	71,630	3770	-
NEXT FIVE YEARS TOTAL	5,13,365	4,87,698	25667	799

Source: Scheme of Approved Mining Plan

TABLE 2.8: YEAR-WISE PROPOSAL FOR FIRST FIVE YEARS PRODUCTION PLAN-P2

YEAR	ROUGH STONE QUARRY (m ³)	RECOVERABLE RESERVES IN (m ³) @ 95%	MINE WASTE IN (m ³) 5%	GRAVEL (m ³)
I	2,38,865	2,26,922	11,943	20,711
II	1,66,535	1,58,208	8,327	-
III	1,47,235	1,39,874	7,361	-
IV	1,28,935	1,22,489	6,446	-
V	1,11,635	1,06,053	5,582	-
NEXT FIVE YEARS TOTAL	7,93,205	7,53,546	39,659	20,711

Source: Scheme of Approved Mining Plan

TABLE 2.9: YEAR-WISE PROPOSAL FOR FIRST FIVE YEARS PRODUCTION PLAN-P3

YEAR	ROUGH STONE QUARRY (m ³)	RECOVERABLE RESERVES IN (m ³) 100%	TOP SOIL (m ³)
I	1,17,530	1,17,530	8,706
II	1,33,980	1,33,980	-
III	67,815	67,815	-
IV	60,865	60,865	-
V	1,01,730	1,01,730	-
TOTAL	4,81,920	4,81,920	8,706

Source: Approved Mining Plan

Disposal of Waste-P1

The overburden in the form of Gravel. The Gravel and Existing Gravel Dump will be directly loaded into tippers for the filling and levelling of low-lying areas. The excavated Rough Stone (100%) will be directly loaded into tippers to the needy customers. There is no Waste anticipated during this plan period hence, disposal of waste does not arise

Disposal of Waste-P2

The overburden in the form of Gravel. The Gravel will be directly loaded into tippers for the filling and levelling of low-lying areas, this will be done only after obtaining permission and paying necessary seigniorage fees to the Government.

Disposal of Waste-P3

The overburden in the form of Topsoil is 8,706m³ up to depth 1m for during this lease period. Topsoil formation will be remove and dumped at all side boundary barrier of the lease area. It will be utilized for afforestation and road low lying areas.

Conceptual Mining Plan/ Final Mine Closure Plan

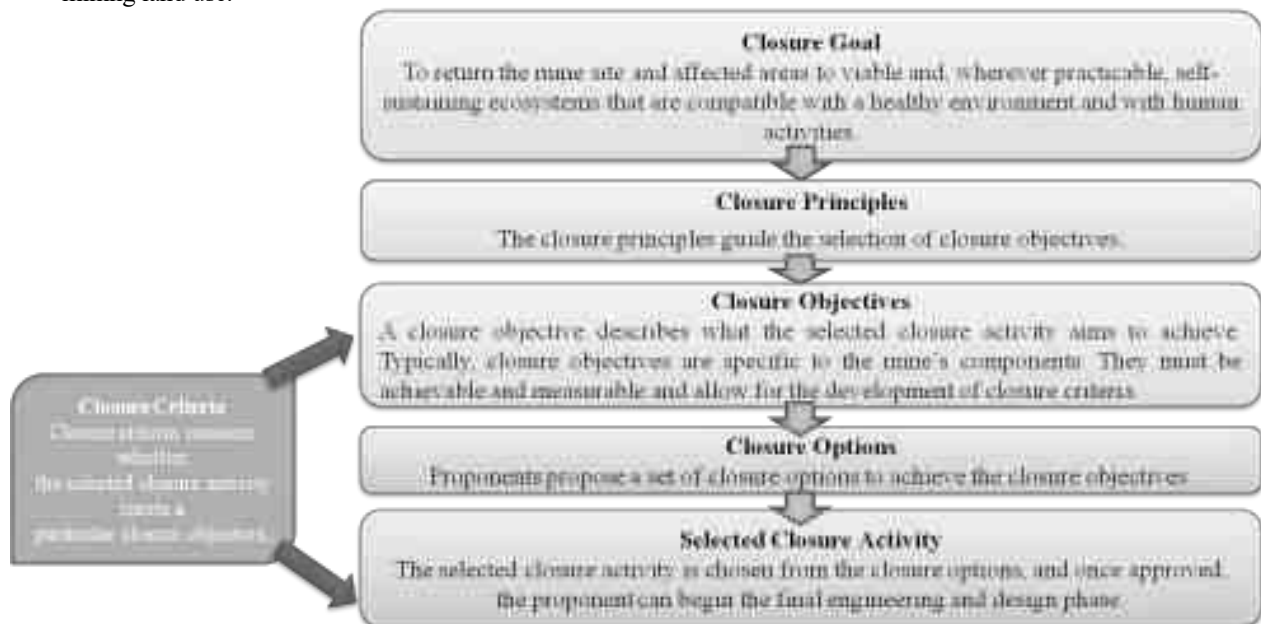
The ultimate pit size is designed based on certain practical parameters such as economical depth of mining, safety zones, permissible area, etc.

TABLE 2.10: ULTIMATE PIT DIMENSIONS- P1& P3

P1			
Pit	Length (Max) (m)	Width (Max) (m)	Depth (Max) (m)
I	287	121	41m
P2			
Pit	Length (Max) (m)	Width (Max) (m)	Depth (Max) (m)
I	286	136	41m Agl
P3			
Pit	Length (Max) (m)	Width (Max) (m)	Depth (Max) (m)
I	229	144	45m

Source: Approved Mining Plan

- At the end of life of mine, the excavated mine pit / void will act as artificial reservoir for collecting rain water and helps to meet out the demand or crises during drought season.
- After mine closure the greenbelt developed along the safety barrier and top benches and temporary water reservoir will enhance the ecosystem
- Mine Closure is a process of returning a disturbed site to its natural state or which prepares it for other productive uses that prevents or minimizes any adverse effects on the environment or threats to human health and safety.
- The principle closure objectives are for rehabilitated mines to be physically safe to humans and animals, geo-technically stable, geo-chemically non-polluting/ non-contaminating, and capable of sustaining an agreed post-mining land use.

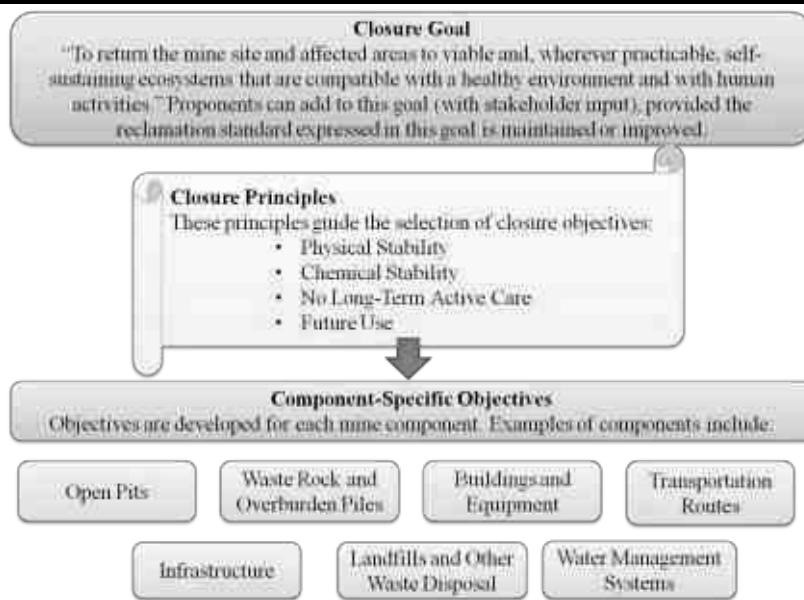


Closure Objectives

- Access to be limited, for the safety of humans and wildlife.
- The open pit mine workings and pit boundary are physically and geo-technically stable.
- Water quality in flooded pits is safe for humans, aquatic life, and wildlife.
- Discharge of contaminated drainage has been minimized and controlled.
- Original or desired new surface drainage patterns have been established.
- For flooded pits, in-pit aquatic habitat has been established where practical and feasible.
- Emergency access and escape routes from flooded pits for humans and wildlife are in place.
- Dust levels are safe for people, vegetation, aquatic life, and wildlife.

Closure Planning & Options Considerations in Mine Design –

- The closure of mine is well planned at the initial stage of planning & design consideration by the internal and external stake holders
- Construction of 2m height bund all along the mine pit boundary and ensure its stability all time & construction of garland drain along the natural slope to avoid sliding and collection of soil to the pit & surface runoff during rainfall
- After complete exploitation of mineral, the lowest bench foot wall side will be maintained as plain surface without any sump pits to avoid any accidents
- All the sharp edges will be dressed to smoother face before the closure of mine and ensure no loose debris on hanging wall side
- There is a river on southern side of the project area. The river will not be hindered by any of mine closure activities
- The project proponent as a part of social responsibilities assures to supply the stored mine pit water to the nearby villages after effective treatment process as per the standards of TNPCB & TWAD
- Native species will be planted in 3 row patterns on the boundary barriers and 1st bench, a full-time sentry will be appointed at the gate to prevent inherent entry of public & cattle.
- The access road to the quarry will be cut-off immediately after the closure
- The layout design shall be prepared and get approved from Department of Geology and Mining.
- The proponent is instructed to construct as per the layout approved
- Physical and chemical stability of structures left in place at the site, the natural rehabilitation of a biologically diverse, stable environment, the ultimate land use is optimized and is compatible with the surrounding area and the requirements of the local community, and taking the needs of the local community into account and minimizing the socio-economic impact of closure
- There will be a positive change in the environmental and ecology due to the mine closure



Post-Closure Monitoring –

The purpose of post-closure monitoring with respect to open pit mine workings is to ensure the attainment of closure objectives.

- Monitor physical and geotechnical stability of remnant pit walls.
- Monitor the ground regime in pit walls to confirm achievement of design objectives.
- Monitor water level in pit to confirm closure objectives regarding fish, fish habitat, and wildlife safety are being achieved.
- Sample water quality and quantity at controlled pit discharge points.
- Identify and test unanticipated areas where water management is an issue.
- Inspect integrity of barriers such as berms & fences.
- Monitor wildlife interactions with barriers to determine effectiveness.
- Inspect aquatic habitat in flooded pits where applicable.
- Monitor dust levels.

TABLE 2.11: MINE CLOSURE BUDGET-P1

ACTIVITY		YEARS					RATE	COST (Rs./-)
		I	II	III	IV	V		
Plantation under safety zone	Nos	170	170	170	170	170	@100 Rs Per sapling	85,000
	Cost	17000	17000	17000	17000	17000		
Plantation in quarried out benches and approach road	Nos	310	310	310	310	310		1,55,000
	Cost	31000	31000	31000	31000	31000		
Barbed Wire Fencing (In Mtrs) 840 Mtrs		252000	-	-	-	-	@300 Rs Per Meter	2,52,000
Garland drain (In Mtrs) 750 Mtrs		225000	-	-	-	-	@300 Rs Per Meter	2,25,000
TOTAL								7,17,000

TABLE 2.12: MINE CLOSURE BUDGET-P2

ACTIVITY		YEARS					RATE	COST (Rs./-)
		I	II	III	IV	V		
Plantation under safety zone	Nos	130	130	130	130	130	@100 Rs Per sapling	65,000
	Cost	13000	13000	13000	13000	13000		
Plantation in quarried out benches and approach road	Nos	360	360	360	360	360	@300 Rs Per Meter	1,80,000
	Cost	36000	36000	36000	36000	36000		
Barbed Wire Fencing (In Mtrs) 630 Mtrs		1,89,000	-	-	-	-	@300 Rs Per Meter	1,89,000
Garland drain (In Mtrs) 575 Mtrs		1,72,500	-	-	-	-	@300 Rs Per Meter	1,72,500
TOTAL								6,06,500/-

TABLE 2.13: MINE CLOSURE BUDGET-P3

ACTIVITY		YEARS					RATE	COST (Rs./-)
		I	II	III	IV	V		
Plantation under safety zone	Nos	170	170	170	170	170	@100 Rs Per sapling	85,000
	Cost	17,000	17,000	17,000	17,000	17,000		
Plantation in quarried out benches and approach road	Nos	310	310	310	310	310	@300 Rs Per Meter	1,55,000
	Cost	31,000	31,000	31,000	31,000	31,000		
Barbed Wire Fencing (In Mtrs) 850 Mtrs		2,55,000	-	-	-	-	@300 Rs Per Meter	2,55,000
Garland drain (In Mtrs) 800 Mtrs		2,40,000	-	-	-	-	@300 Rs Per Meter	2,40,000
TOTAL								7,35,000

Source: Proposed by FAE's

2.5 Method of Mining

The method of mining is common for all the proposed projects – The method of mining is Opencast Mechanized Mining Method is being proposed by formation of 5.0-meter height bench with a bench width not less than the bench height. However, as far as the quarrying of Rough Stone quarry is concerned, observance of the provisions of Regulation 106 (2) (b) as above is seldom possible due to various inherent petro genetic factors coupled with mining difficulties. Hence it is proposed to obtain relaxation to the provisions of the above regulation from the Director of Mines Safety for which necessary provision is available with the Regulation 106 (2) (b) of MMR-1961, under Mine Act – 1952.

The top layer of overburden (Gravel) will be Excavate directly by Hydraulic Excavators and loaded into tippers directly and sold to needy customers. The Rough Stone quarry is a batholith formation and the splitting of rock

mass of considerable volume from the parent rock mass will be carried out by deploying jackhammer drilling and Slurry Explosives will be used for blasting. Hydraulic Excavators attached with Rock Breakers unit will be deployed for breaking large boulders to required fragmented sizes to avoid secondary blasting and hydraulic excavators attached with bucket unit will be deployed for loading the Rough Stone quarry into the tippers and then the stone is transported from pithead to the nearby crushers.

2.5.1 Drilling

Drilling will be carried out as per parameters given below: -

Spacing – 1.2m, Burden – 1.0, Depth of hole - 1.5m

2.5.2 Blasting

Blasting will be done as per details below: -

- Controlled blasting parameter: -
 - Spacing – 1.2m
 - Burden – 1.0 m
 - Depth of hole – 1.5m
 - Charge per hole – 50grams
 - Powder factor – 6.0 tonnes/kg
 - Dia of hole – 30-32 mm

Details of blasting design and parameters are discussed in approved mining plan.

Volume of Rough Stone quarry will be excavated from one hole	=	3 Tonnes
Total Volume from three proposed quarries	=	17,88,490 m ³
	=	17,88,490 /5
	=	3,57,698/300
	=	1,192* 2.6
	=	3,100 Tonnes per day
Therefore, Number of Holes per day	=	3,100 /3
	=	1033 Holes per day (for 3 Quarries)

Type of Explosives to be used –

Slurry explosives (An explosive material containing substantial portions of a liquid, oxidizers, and fuel, plus a thickener), NONEL / Electric Detonator & Detonating Fuse.

2.5.3 Extent of Mechanization

TABLE 2.14 PROPOSED MACHINERY DEPLOYMENT

PROPOSAL – P1					
S.NO.	TYPE	NOS	SIZE/CAPACITY	H.P	MOTIVE POWER
1	Jack hammers	5	25.5mm/Hand held	60	Diesel Drive
2	Compressor	1	400psi		Diesel Drive
3	Hydraulic Excavator	2	1.2m ³ /L&T or Ex200	120	Diesel Drive

4	Tipppers	3	10 M.T/Ashok Leyland	110	Diesel Drive
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PROPOSAL – P2					
S.NO.	TYPE	NOS	SIZE/CAPACITY	H.P	MOTIVE POWER
1	Jack hammers	5	25.5mm/Hand held	60	Diesel Drive
2	Compressor	1	400psi		Diesel Drive
3	Hydraulic Excavator	2	1.2m ³ /L&T or Ex200	120	Diesel Drive
4	Tipppers	3	10 M.T/Ashok Leyland	110	Diesel Drive

Source: Approved Scheme of Mining Plan of the respective projects.

PROPOSAL – P3					
S.NO.	TYPE	NOS	SIZE/CAPACITY	H.P	MOTIVE POWER
1	Jack hammers	4	25.5mm/Hand held-Atlas copco	60	Diesel Drive
2	Compressor	2	400psi		Diesel Drive
3	Hydraulic Excavator	3	1.2m ³ /L&T or Ex200	120	Diesel Drive
4	Tipppers	3	10 M.T/Ashok Leyland	110	Diesel Drive

Source: Approved Mining Plan.

2.6 General Features

2.6.1 Existing Infrastructures

Infrastructures like Mine office, Temporary Rest shelters for workers, Latrine and Urinal Facilities are available in the Existing quarries and the same infrastructure as per the Mine Rule will be arranged after the grant of quarry lease in the proposed quarries.

2.6.1 Drainage Pattern

The general drainage pattern of the area is dendritic. There are no streams, canals or water bodies crossing within the project area, hence there is no requirement of stream or canals diversion in the near future.

2.6.2 Traffic Density

Traffic density measurements were performed as per IRC 1960 Guidelines at three locations based on the transportation route. Traffic density measurement were made continuously for 24 hours by visual observation and counting of vehicles under three categories, viz., heavy motor vehicles, light motor vehicles and two/three wheelers. As traffic densities on the roads are high, two skilled persons were deployed simultaneously at each station during each shift- one person on either direction for counting the traffic. At the end of each hour, fresh counting and recording was undertaken.

TABLE 2.15 – TRAFFIC SURVEY LOCATION'S

Station code	Station location	Distance and Direction	Type of Road
TS1	Chinnampalli to Krishnagiri Road	990m-SW	Panchayat Road
TS2	Chinnampalli to Peddathanapalli Road	1.1Km-NE	Panchayat Road

Source: On-site monitoring by GEMS FAE & TM

FIGURE 2.19: TRAFFIC SURVEY LOCATIONS & TRANSPORTATION ROUTE MAP

Source: Survey of India Toposheet

TABLE 2.16 – EXISTING TRAFFIC VOLUME

Station code	HMV (Hourly Average)		LMV hourly average		2/3 Hourly average		Total PCU per hour
	No	PCU	No	PCU	No	PCU	
TS1	45	135	15	45	40	20	200
TS2	75	225	35	105	150	75	400

Source: On-site monitoring by GEMS FAE & TM

- PCU conversion factor for HMV (Trucks and Bus) = 3, LMV (Car, Jeep and Auto) = 1 and 0.5 for Motor Vehicles (2/3 Wheelers)

TABLE 2.17 – ANTICIPATED TRAFFIC DUE TO THIS PROPOSED PROJECT

Transportation of Rough Stone quarry per day		
Capacity of trucks	Cumulative Trips	Volume in PCU
10/20 tonnes	96Trips	288

Source: Anticipated based on Approved Mining Plan Production

TABLE 2.18– SUMMARY OF TRAFFIC VOLUME

Route	Existing traffic value in PCU	Incremental traffic from the quarry in PCU	Total traffic volume	Hourly Capacity in PCU as per IRC guidelines
Chinnampalli to Krishnagiri Road	200	288	488	1200
Chinnampalli to Peddathanapalli Road	400	288	688	1200

Source: On-site monitoring analysis summary by GEMS FAE & TM

2.6.3 Mineral Beneficiation and Processing

There is no proposal for the mineral processing or ore beneficiation in this project

2.6.4 Existing Infrastructure

It is an existing quarry, no infrastructural facility available within the project area. The infrastructural facilities to be made after the start of the quarrying operations will be prepared outside limit as per the rules and safe distance to be adopted.

2.6.2 Drainage Pattern

The drainage pattern of the area is dendritic – sub dendritic.

2.7 Project Requirement

2.7.1 Water Source & Requirement

Detail of Total water requirements in KLD as given below:

TABLE 2.19 – WATER REQUIREMENT FOR THE CLUSTER PROJECT -P1& P3

PROPOSAL – P1		
*Purpose	Quantity	Source
Dust Suppression	1.0KLD	From Existing bore wells from nearby area
Green Belt development	0.5KLD	From Existing bore wells from nearby area
Drinking and Domestic purpose	1.0KLD	From existing, bore wells and drinking water will be sourced from Approved water vendors.
Total	2.5 KLD	
PROPOSAL – P2		
*Purpose	Quantity	Source
Dust Suppression	1.0KLD	From Existing bore wells from nearby area
Green Belt development	0.5KLD	From Existing bore wells from nearby area
Drinking and Domestic purpose	1.0KLD	From existing, bore wells and drinking water will be sourced from Approved water vendors.
Total	2.5 KLD	
PROPOSAL – P3		
*Purpose	Quantity	Source
Dust Suppression	0.9KLD	The required water will be met from rainwater accumulated in mine pit (when available) and from the approved water vendors.
Green Belt development	0.8KLD	The required water will be met from rainwater accumulated in mine pit (when available) and from the approved water vendors.
Sanitation and Drinking purpose	0.6KLD	Approved water vendors.
Total	2.3 KLD	

Source: Prefeasibility Report

About 50% water will be required for the suspension of the dust, Water shall be obtained from accumulated rainwater/seepage water in quarry pits. Packaged Drinking Water is available from the nearby approved water vendors.

2.7.2 Power and Other Infrastructure Requirement

The project's does not require power supply for the quarry operation. The quarrying activity is proposed during day time only (General Shift 8 AM – 5 PM, Lunch Break 1 PM – 2 PM). Electricity for use in office and other internal infrastructure will be obtained from TNEB. For the quarrying operation like compressor for drilling Diesel will be utilized.

The temporary infrastructures such as Mine Office, First Aid Room, Rest Shelter etc., will be constructed within the project area before commencing the quarry operation. No workshops are proposed inside the project area hence there will not be any process effluent generation from the project area. Domestic effluent from the mine office

will be discharged to septic tank and soak pit. There is no toxic effluent expected to generate in the form of solid, liquid or gaseous form hence there is no requirement of waste treatment.

2.7.3 Fuel Requirement -P1

Fuel is to be used in form of diesel for quarrying operations, compressors and running of tippers and other transportation vehicles. Quantity for fuel will depend upon the usage of transportation vehicle and other machineries and level of achievement of estimated production. Diesel will be out sourced from nearby diesel pumps.

Fuel Requirement -P1

Gravel:

Per hour Excavator will consume	=	10 liters / hour
Per hour Excavator will excavate	=	60m ³ of Gravel
Gravel quantity	=	799/60 = 13 hours
Diesel consume	=	13 hours x 10 liters
Total diesel consumption	=	130 Liters of HSD will be utilized for Gravel

Rough stone:

Per hour Excavator will consume	=	16 liters / hour
Per hour Excavator will excavate	=	20m ³ of Rough stone
Rough stone quantity	=	5,13,365/20 = 25,668 hours
Diesel consume	=	25,668 hours x 16 liters
Total diesel consumption	=	4,10,688 Liters of HSD will be utilized for Rough stone
Total diesel consumption	=	130 Liters of HSD will be utilized for five years.

Fuel Requirement -P2

Gravel:

Per hour Excavator will consume	=	10 liters / hour
Per hour Excavator will excavate	=	60m ³ of Gravel
Gravel quantity	=	20,711/60 = 345 hours
Diesel consume	=	345 hours x 10 liters
Total diesel consumption	=	3450 Liters of HSD will be utilized for Gravel

Rough stone:

Per hour Excavator will consume	=	16 liters / hour
Per hour Excavator will excavate	=	20m ³ of Rough stone
Rough stone quantity	=	5,13,365/20 = 39,660 hours
Diesel consume	=	39,660 hours x 16 liters
Total diesel consumption	=	6,34,560 Liters of HSD will be utilized for Rough stone
Total diesel consumption	=	6,38,010 Liters of HSD will be utilized for five years.

Fuel Requirement -P3

Top soil:

Per hour Excavator will consume	=	10 liters / hour
---------------------------------	---	------------------

Per hour Excavator will excavate	=	60m ³ of Top soil
Top soil quantity	=	8,706/60 = 145hours
Diesel consume	=	145hours x 10 liters
Total diesel consumption	=	1,450Liters of HSD will be utilized for Top soil

Rough stone:

Per hour Excavator will consume	=	16 liters / hour
Per hour Excavator will excavate	=	20m ³ of Rough stone
Rough stone quantity	=	4,81,920/20 = 2,40,961hours
Diesel consume	=	2,40,961hours x 16 liters
Total diesel consumption	=	3,85,536 Liters of HSD will be utilized for Rough stone
Total diesel consumption	=	3,86,986 Liters of HSD will be utilized for first five years.

2.7.4 Employment Requirement:

The skilled, competent qualified statutory persons will be engaged for quarrying operation, preference will be given to the local community.

TABLE 2.20: EMPLOYMENT POTENTIAL FOR PROPOSED QUARRIES

Identification code	Employment in Nos
P1	21
P2	21
P3	18
Total	60

A total of 60 people will get employment due to these 3 quarries in the cluster quarries.

2.7.5 Project Cost**TABLE 2.21 – PROJECT COST OF PROPOSED PROJECTS**

Identification code	Project Cost
P1	Rs. 77,30,000/-
P2	Rs. 77,20,000/-
P3	Rs. 83,92,000/-
Total	Rs. 2,38,42,000/-

Source: Approved Scheme of Mining Plan & Prefeasibility Report of the respective projects

2.8 Project Implementation Schedule

The commercial operation will commence after the grant of Environmental Clearance. CTO will be obtained from the Tamil Nadu State Pollution Control Board. The conditions imposed during the Environmental Clearance will be compiled before the start of mining operation.

TABLE 2.22 – EXPECTED TIME SCHEDULE FOR THE PROPOSED QUARRIES

S. No	Particulars lease execution	Time schedule (in month)					Remarks if any
		1 st	2 nd	3 rd	4 th	5 th	
1	Environmental Clearance						
2	Consent to operate						Production start period

CHAPTER – 3: DESCRIPTION OF ENVIRONMENT

3.0 General

This chapter presents a regional background to the baseline data at the very onset, which will help in better appreciation of micro-level field data, generated on several environmental and ecological attributes of the study area. The baseline status of the project environment is described section wise for better understanding of the broad-spectrum conditions. The baseline environment quality represents the background environmental scenario of various environmental components such as Land, Water, Air, Noise, Biological and Socio-economic status of the study area. Field monitoring studies to evaluate the base line status of the project site were carried out covering Oct 2023 – Dec 2023 with CPCB guidelines. Environmental data has been collected with reference to cluster quarries by EHS 360 Labs Private Limited, – An accredited by ISO/IEC 17025:2017 (NABL) Laboratory for the below attributes- for the below attributes -

- Land
- Water
- Air
- Noise
- Biological
- Socio-economic status

Study Area

An area of 10 km radius (aerial distance) from the periphery of the cluster is considered for EIA study. The data collection has been used to understand the existing environment scenario around the cluster quarries against which the potential impacts of the project can be assessed. The study area has been divided into two zones viz **core zone** and **buffer zone** where core zone is considered as cluster and buffer zone taken as 10km radius from the periphery of the Cluster. Both Core zone and Buffer zone is taken as the study area.

Study Period

The baseline study was conducted during the Post monsoon season i.e., Oct 2023-Dec 2023

Methodology

Baseline data was generated for various environmental parameters including Land, Soil, Water (surface and groundwater), Air, Noise, Ecology & Biodiversity and Socio-economic status to determine the quality of the prevailing environmental settings. A MoEF accredited Laboratory was used for generating the baseline data.

1. The project area (Core zone) was surveyed in detail with the help of Total Station survey instrument and the boundary pillars were picked up with the help of handheld GPS. The boundary coordinates were superimposed on the satellite imagery to understand the relief of the area, besides Land use pattern of the area was studied through the Bhuvan (ISRO).
2. Soil samples were collected and analysed for relevant physico-chemical characteristics, exchangeable cations, nutrients & micro nutrients etc., in order to assess the impact of mining activities and proposed greenbelt development.
3. Ground water samples were collected during the study period from the open wells and bore wells, while surface water was collected from river and lake in the buffer zone. The samples were analysed for

parameters necessary to determine water quality (based on IS: 10500:2012 criteria) and those which are relevant from the point of view of environmental impact of the proposed quarries.

4. A meteorological station was setup in pachapalayam village. Wind speed, Wind direction, Dry and wet bulb temperature, Relative humidity, Rainfall with cloud cover and general weather conditions were recorded throughout the study period.
5. In order to assess the Ambient Air Quality (AAQ), samples of Ambient Air were collected by installation of Respiratory Dust Samplers (RDS) for Fugitive dust, PM₁₀ and SO₂, NO_x with gaseous attachments & Fine Dust Samplers (FDS) for PM_{2.5} and other parameters as per NAAQ norms and analysed for primary air pollutants to work out the existing status of air quality.
6. The noise level measurements were also made at various locations in different intervals of time with the help of sound level meter to establish the baseline noise levels in the impact zone.
7. Baseline biological studies were carried out to assess the ecology of the study area to study the existing flora and fauna pattern of the area.
8. Socio-Economic survey was conducted at village and household level in the study area to understand the present socio-economic conditions and assess the extent of impact due to the proposed mining project.

The sampling methodologies for the various environmental parameters required for the study, frequency of sampling, method of samples analysis, etc., are given below Table 3.1.

TABLE 3.1 – ENVIRONMENTAL MONITORING ATTRIBUTES AND FREQUENCY OF MONITORING

Attribute	Parameters	Frequency of Monitoring	No. of Locations	Protocol
Land-use Land cover	Land-use Pattern within 10 km radius of the study area	Data from census handbook 2011 and from the satellite imagery	Study Area	Satellite Imagery Primary Survey
*Soil	Physio-Chemical Characteristics	Once during the study period	6 (2 core & 4 buffer zone)	IS 2720 Agriculture Handbook - Indian Council of Agriculture Research, New Delhi
*Water Quality	Physical, Chemical and Bacteriological Parameters	Once during the study period	6 (2 surface water & 4 ground water)	IS 10500 & CPCB Standards
Meteorology	Wind Speed Wind Direction Temperature Cloud cover Dry bulb temperature Rainfall	1 Hourly Continuous Mechanical/Automatic Weather Station	1	Site specific primary data & Secondary Data from IMD Station
*Ambient Air Quality	PM ₁₀ PM _{2.5} SO ₂ NO _x Fugitive Dust	24 hourly twice a week (October – December 2023)	7 (2 core & 5 buffer)	IS 5182 Part 1-23 National Ambient Air Quality Standards, CPCB
*Noise Levels	Ambient Noise	Hourly observation for 24 Hours per location	7 (2 core & 5 buffer zone)	IS 9989 As per CPCB Guidelines
Ecology	Existing Flora and Fauna	Through field visit during the study period	Study Area	Primary Survey by Quadrante & Transect Study

				Secondary Data – Forest Working Plan
Socio Economic Aspects	Socio–Economic Characteristics, Population Statistics and Existing Infrastructure in the study area	Site Visit & Census Handbook, 2011	Study Area	Primary Survey, census handbook & need based assessments.

Source: On-site monitoring/sampling by EHS 360 Labs Private Limited in association with GEMS

* All monitoring and testing are been carried out as per the Guidelines of CPCB and MoEF & CC.

3.1 LAND ENVIRONMENT

The main objective of this section is to provide a baseline status of the study area covering 10km radius around the proposed mine site so that temporal changes due to the mining activities on the surroundings can be assessed in future.

3.1.1 LAND USE/LAND COVER

To study the land use pattern of the core as well as a buffer zone, land use/land cover details have been identified/ maps have been prepared in accordance with the **Standard ToR point no. 4 & 10 Stating:**

Point No. 4 All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/ topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).

Point No. 10. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted.

Current vintage data of Indian Remote Sensing Satellite ResourceSat-2A L-III (False Color Composite) has been used for Land Use / Land Cover study. Satellite image has been procured from National Remote Sensing Centre, Hyderabad.

3.1.2 OBJECTIVE

The objectives of the LULC study are as follow:

- ☞ To develop the Land use & Land cover map using land coordinates of the plant area (Core Zone) and 10 km radius from the plant site (Buffer area).
- ☞ To Identify and mark the important Land use and Land cover features using the primary and secondary data collected.
- ☞ To evaluate the impacts on existing land use/cover features of the buffer area by the Proposed Project activities.
- ☞ To identify the mitigative measures for the sustainable use of land and to protect the buffer zone from the adverse impacts.

Technical specification of Satellite imagery Data Used:

Current vintage data of Indian Remote Sensing Satellite RESOURCESAT1 (LISS-III) digital FCC (False Color Composite) has been used for preparation of Land use/ Land cover thematic map of study area. Satellite

image has been procured from National Remote Sensing Centre, Hyderabad. Survey of India Toposheet as a reference map on 1:50,000 scale has been used for preparation of base layer data like road, rail network; village for geo-referencing of satellite image.

- ☞ Satellite Image - Resourcesat1-LISSIII, 23.5m Resolution
- ☞ Satellite Data Source - NRSC, Hyderabad
- ☞ Satellite Vintage - 14st Sept 2022, Swath 141km wide.
- ☞ SOI Toposheet No - 57 L/2
- ☞ Software Used - ArcGIS 10.8

The satellite image (FCC color 3,2,1) of the buffer zone is given in 3.1

The spatial resolution and the spectral bands in which the sensor collects the remotely sensed data are two important parameters for any land use survey. Resourcesat1-LISSIII, 23m Resolution of 23.5m and a 141 km wide swath of the earth in 23.5m resolution covering wide areas the data is collected in 4 visible bands namely band number and Resolution.

TABLE 3.2: Resourcesat1-LISSIII SENSOR characteristics

Band Number	Description	Wavelength	Resolution
Band 1	Green	0.52-0.59 μm	23.5 meters
Band 2	Red	0.62-0.68 μm	23.5meters
Band 3	NIR	0.77-0.86 μm	23.5meters
Band 4	SWIR	1.55-1.70 μm	70meters

Source: NRSC, Hyderabad

3.1.3 METHODOLOGY

The land use / land cover map is prepared by adopting the interpretation techniques of the Satellite image in combination with collateral data such as Survey of India topographical maps. Image classification is done by using visual interpretation techniques and digital classification using any of the image processing software. The various activities for preparation of LULC include preprocessing, rectification, image enhancements and classifying the satellite data for assessing the change in land use land cover due to proposed developmental activities.

- ☞ Preliminary/primary data collection of the study area
- ☞ Satellite data procurement from NRSC
- ☞ Secondary data collection from authorized bodies
- ☞ Survey of India Toposheet (SOI)
- ☞ Mine Layout
- ☞ Cadastral / Khasra map
- ☞ GPS Coordinates of Lease Boundary

- ☞ Processing of satellite data using ArcGIS 10.8 and preparing the Land Use & Land cover maps (e.g. Plant/Mine area, Existing Quarries, Settlements, Agriculture land, Non agriculture land, water bodies, etc.) by Digital Image Processing (DIP) technique.
- ☞ Geo-Referencing of the Survey of India Toposheet
- ☞ Geo-Referencing of satellite Imagery with the help of Geo-Referenced Toposheets
- ☞ Enhancement of the Satellite Imagery
- ☞ Base Map layer creation (Roads, Railway, Village Names, and other Secondary data, etc.)
- ☞ Data analysis and Classification using Digital interpretation techniques.
- ☞ Ground truth studies or field Verification.
- ☞ Error fixing / Reclassification
- ☞ Final Map Generation.

The land use/Land cover Map of the buffer zone is given in 3.4(b).

Land Use Pattern of the Buffer Zone (Study area)

Details of the same are given in Table - 3.3 and the map is shown in Figure - 3.2

TABLE: 3.3 LAND USE / LAND COVER DETAILS OF STUDY AREA

S.No	CLASSIFICATION	AREA_HA	AREA_%
BUILTUP			
1	Builtup Urban	637.65	1.90
2	Builtup Rural	264.69	0.79
3	Builtup Mining	148.83	0.44
AGRICULTURAL LAND			
4	Crop Land	18967.75	56.54
5	Agriculture Land	142.29	0.42
6	Fallow Land	4615.93	13.76
BARREN/WASTE LANDS			
7	Scrub Land	3904.02	11.64
8	Barren Rocky	885.05	2.64
FOREST			
9	Forest	1846.36	5.50
WETLANDS/ WATER BODIES			
10	Waterbodies	2132.77	6.36
TOTAL		33545.36	100.00

Source: Bhuvan, NRSC.

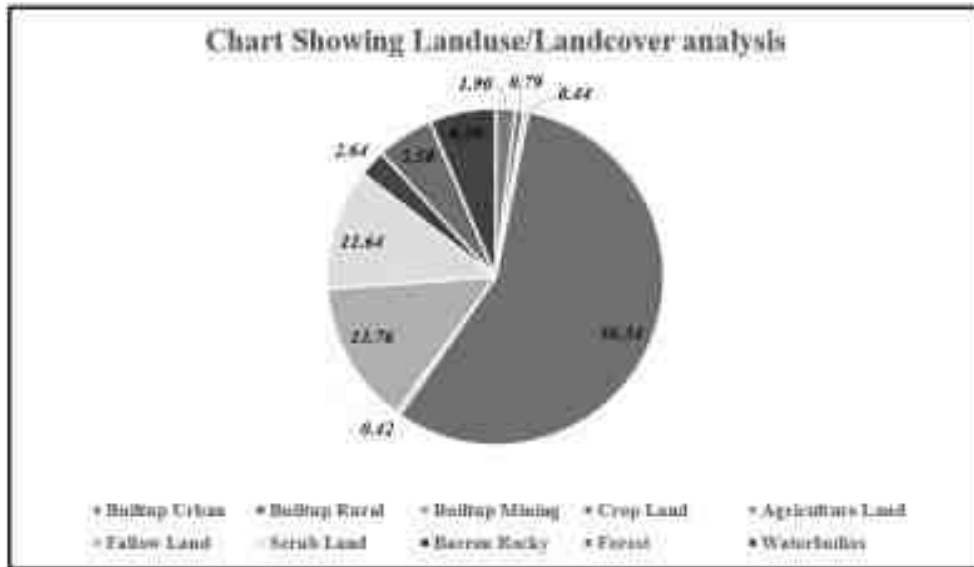


FIGURE 3.1: CHART SHOWING LANDUSE/LANDCOVER ANALYSIS USING LISS III Data

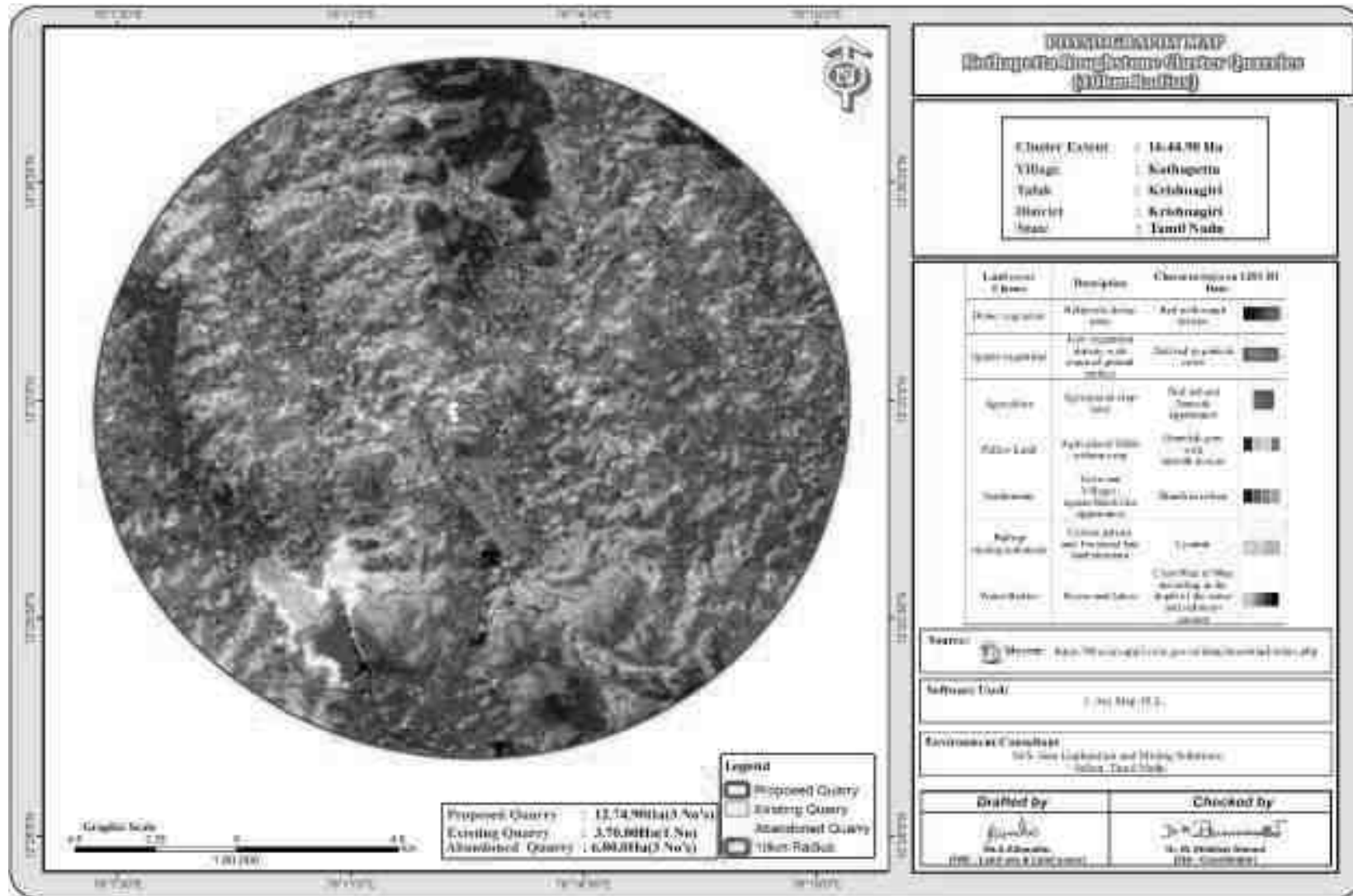


FIGURE 3.2: MAP SHOWING FALSE COLOR COMPOSITE (3,2,1) SATELLITE IMAGERY OF THE STUDY AREA

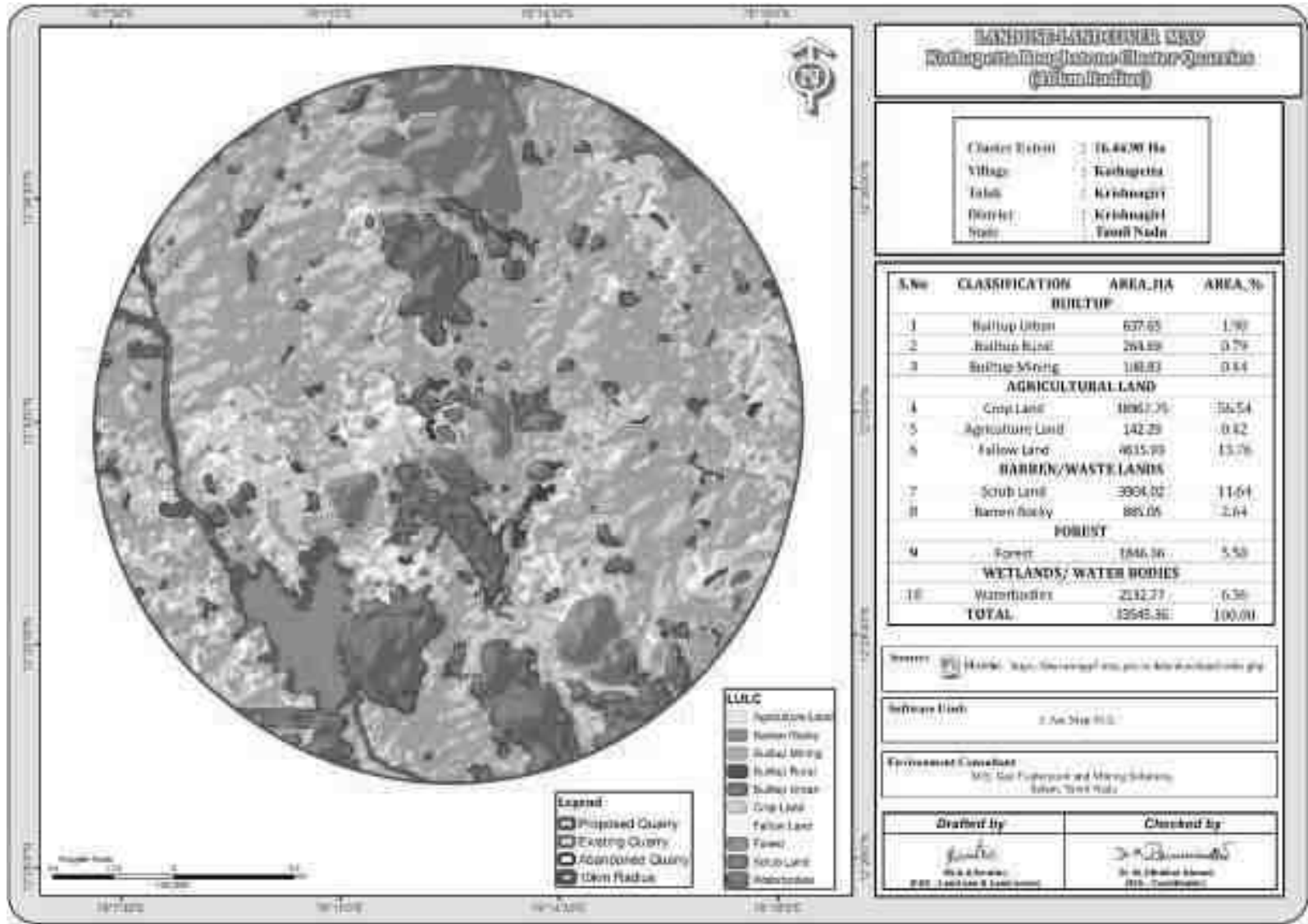


FIGURE 3.3: LAND USE LAND COVER MAP 10KM RADIUS

3.1.4 Interpretation

- ☞ The 10 km radius study area mainly comprises of crop land & Agriculture land accounting of 56.54% & 0.42% of the total study area. The study area also consists of fallow land of 13.76%.
- ☞ The buffer zone studied has no ecological sensitive area (National Park, Wildlife Sanctuary, Biosphere Reserve/ etc.).
- ☞ Water Bodies such as Rivers, Ponds/ lakes comprises of 6.36% of the total buffer area. The two seasonal rivers such as Ponnaiyar River 7.1km-SW, Badethala Lake 1.9km in NE and Krishnagiri Dam 4.5km-SW direction of the total study area.
- ☞ The Scrub land accounts of 11.64%. As per the primary survey, it was observed the scrub land is mainly occupied by the stony waste and left-over domestic waste generated by the nearby areas.
- ☞ The Peddathalapalli R.F-2.2km-SW direction in 5.50% covered in buffer zone.
- ☞ 0.44% of the total study area has occupied by the mine industries. The area occupied by Mainly Roughstone of the total buffer area. As also observed within the primary survey, the 10 km buffer area is also occupied by the medium scaled granite and small Brick kiln industries also located in the study area.
- ☞ 2.69% of the area is covered under the Builtup Land. The nearest village within the 3 km radius from the project site boundary is observed to be villages Kothapetta, Chinnampalli, Kallukurukki, and Krishnagiri Town & Panchayat etc.,

3.1.5 Cropping Pattern of the Buffer Zone

Krishnagiri district is one of the potential districts for cultivation of agricultural and horticultural crops. total cultivated area of 224767 Hectares, out of which 180902 Ha Net cultivated area against the 5,14,325 Ha. of total geographical area.

It is one of the potential districts for agricultural and horticultural crop production. The major agricultural crops in the district are grown Paddy, Ragi, Redgram, Cowpea, Maize, Cumbu, Groundnut, Horsegram and minor millets. The major cultivated area of agricultural crops occupied by rainfed agriculture. The major horticultural crops grown in the district are fruit crops like Mango, Banana and Guava, Vegetable like eggplant, okra, capsicum, onion and chilli, spices like Turmeric, Black pepper and flower crops like Rose, Gerbera and Carnations.

Source: <https://www.agrifarming.in/district-wise-crop-production-in-tamil-nadu#krishnagiri>

3.1.6 Interpretation and Conclusion

- ☞ Kothapetta village Roughstone cluster quarries has proposed Project. It is a Patta land.
- ☞ Total project area is 33545.36 ha around 10km radius.
- ☞ Existing/ Proposed mine is coming in the area, percentage of human settlement will be increased in surrounding of project site and Infrastructure facilities also will be developed on the basis of requirement.
- ☞ The 10 km study area mostly covers of crop land 56.54%. As per current study area is occupied by scrub land 11.6%, Barren rocky land 2.64% and Forest land is 5.50%, Water bodies 6.36% in 10 km radius from the study area land use into quarrie purpose for this proposed project.

☞ The project site falls under the Roughstone region. Therefore, the area is appropriate for developing Road development and building etc., it shows that the region has good prospects in the future. Due to proposed Roughstone in this region, economic condition of locals is expected to be improved directly & indirectly. Hence project will prove to be the best economic proposal for the coming times.

3.1.7 Topography

The project area is slightly elevated topography, surrounded by quarries and Crushing units. Altitude of the area is 537m AMSL there are no hilly regions in and around the area.

3.1.8 Drainage Pattern of the Area

There are no developed surface drainage channels in the study area. Ponnaiyar River a perennial pass 7.2km-South West from the project site. The area is studded with few tanks that serve as the source of drinking water and also their surplus feeds adjoining tanks. The area is mostly dry in all seasons except rainy seasons.

The general drainage pattern of the area is of sub dendritic and dendritic pattern. No prominent water course or nallah is inferred. During rainy season the surface run off flows in N to SW direction. The drainage pattern of the study area is given in Fig. 3.5. The quarrying activity will not hinder the natural flow of rainwater.

3.1.9 Environmental Features in the Study Area

There is no Wildlife Sanctuaries, National Park and Archaeological monuments within the study area. No Protected and Reserved Forest area is involved in the project area. Therefore, there will be no need to acquisition/diversion of forest land. The details related to the environment sensitivity around the mine lease area i.e., 10 km radius of the mine lease area, are given in the below Table 3.3.

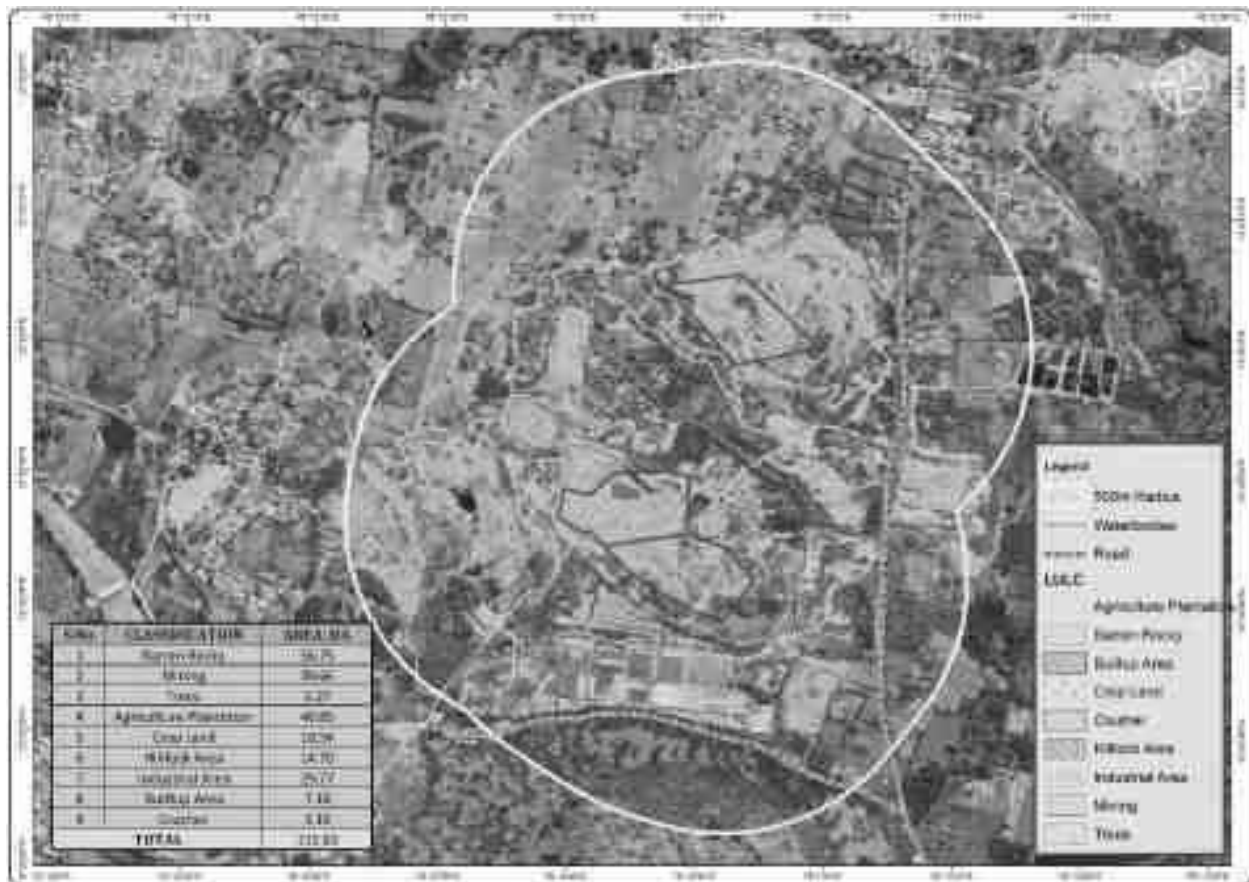
3.1.10 Seismic Sensitivity

The proposed project site falls in the seismic Zone III, low damage risk zone as per BMTPC, Vulnerability Atlas of Seismic zone of India IS: 1893 – 2002. The project area falls in the hard rock terrain on the peninsular shield of south India which is highly stable.

TABLE 3.4 – DETAILS OF ENVIRONMENT SENSITIVITY AROUND THE PROJECT AREA

Sl. No	Sensitive Ecological Features	Name	Arial Distance in km from Mine Lease Boundary
1	National Park / Wild life Sanctuaries	Cauvery North Wildlife Sanctuary	26km-SW
2	Reserve Forest	Peddathalapalli R. F	2.2km-SW
3	Tiger Reserve/ Elephant Reserve/ Biosphere Reserve	None	Nil within 10Km Radius
4	Critically Polluted Areas	None	Nil within 10Km Radius
5	Mangroves	None	Nil within 10Km Radius
6	Mountains/Hills	None	Nil within 10Km Radius
7	Notified Archaeological Sites	None	Nil within 10Km Radius
8	Defence Installation	None	Nil within 10Km Radius

Source: Survey of India Toposheet, Village Cadastral Map & Google Earth/Maps

FIGURE 3.4: LAND USE LAND COVER MAP 500M RADIUS**Table 3.5: LAND USE LAND COVER MAP 500M RADIUS**

S. No	CLASSIFICATION	AREA HA
1	Agricultural Land	2.75
2	Barren Land	103.31
3	Barren Rocky	14.91
4	Builtup Area	5.40
5	Crop Land	13.80
6	Crusher	0.52
7	Dump Area	2.38
8	Industrial Area	12.71
9	Mining Area	23.24
10	Scrub Land	25.68
11	Trees Plantation	1.95
TOTAL		206.65

Interpretation

Land use Landcover of the area within 500m radius were studied in detailed that the majority of the land within 500m is Barren land (103.31ha) followed by Mining area (23.24ha), Scrub land (25.68ha) Crop land (13.80ha), Trees Plantation (1.95ha) are contributing majority of the land use.

3.1.11 Soil Environment

Soil quality of the study area is one of the important components of the land environment. The composite soil samples were collected from the study area and analysed for different parameters. The locations of the monitoring sites are detailed in Table 3.6 and Figure 3.6.

TABLE 3.6 – SOIL SAMPLING LOCATIONS

S. No	Location Code	Monitoring Locations	Distance & Direction	Coordinates
1	S-1	Core Zone	Project Area	12°32'41.84"N 78°12'48.10"E
2	S-2	Core Zone	Project Area	12°32'49.96"N 78°12'47.70"E
3	S-3	Chinimalpalli	900m North	12°33'15.92"N 78°12'56.84"E
4	S-4	Billanakuppam	5.8km NW	12°34'52.98"N 78°10'11.08"E
5	S-5	Peddnapalli	4.5km SE	12°31'11.44"N 78°14'48.70"E
6	S-6	MC Palli	7.5km NE	12°35'53.43"N 78°15'30.30"E

Source: On-site monitoring/sampling by EHS 360 Labs Private Limited in association with GEMS

FIGURE 3.6: SITE PHOTOGRAPHS OF SOIL SAMPLING LOCATIONS



The objective of the soil sampling is -

1. To determine the baseline soil characteristics of the study area;
2. To determine the impact of proposed activity on soil characteristics and;

To determine the impact on soil more importantly agriculture production point of view.

Methodology –

For studying soil quality, sampling locations were selected to assess the existing soil conditions in and around the proposed quarry site representing various land use conditions. The samples were collected by auger boring into the soil up to 90-cm depth. six (6) locations were selected for soil sampling on the basis of soil types, vegetative cover, industrial & residential activities including infrastructure facilities, which would accord an overall idea of the soil characteristics. The samples were analysed for physical and chemical characteristics. The sealed samples were sent to laboratory for analysis. The samples were filled in Polythene bags, coded and sent to laboratory for analysis and the details of methodology in respect are given in below Table 3.7.

TABLE 3.7 – METHODOLOGY OF SAMPLING COLLECTION

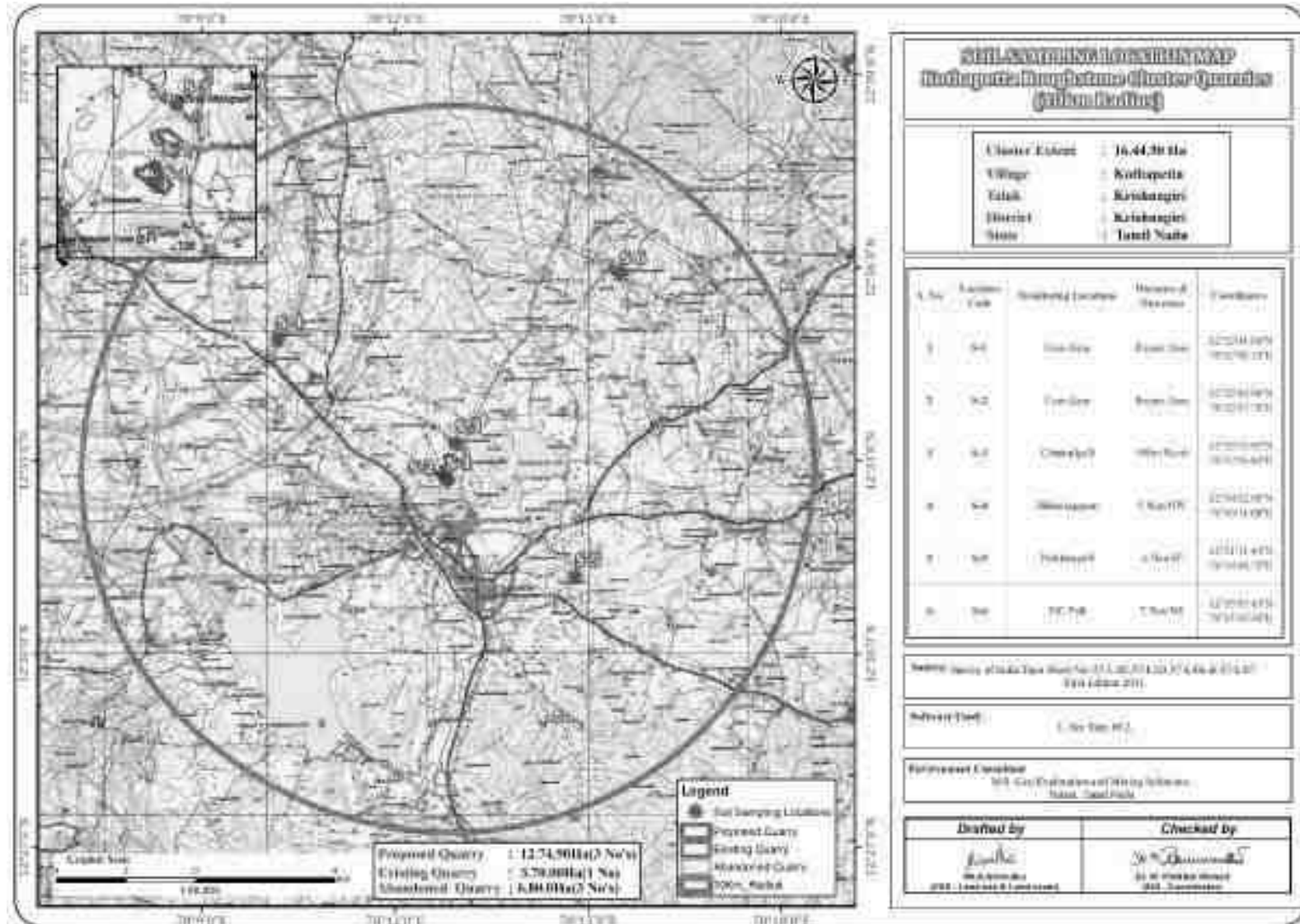
Particulars	Details
Frequency	One grab sample from each station-once during the study period
Methodology	Composite grab samples of the topsoil were collected from 3 depths, and mixed to provide a representative sample for analysis. They were stored in airtight Polythene bags and analysed at the laboratory.

Source: On-site monitoring/sampling by EHS 360 Labs Private Limited

Soil Testing Result –

The samples were analysed as per the standard methods prescribed in “Soil Chemical Analysis (M.L. Jackson, 1967) & Department of Agriculture, Cooperation & Farmers Welfare, Ministry of Agriculture & Farmers Welfare, Government of India”. The important properties analysed for soil are bulk density, porosity, infiltration rate, pH and Organic matter, kjeldahi Nitrogen, Phosphorous and Potassium. The standard classification of soil and physico-chemical characteristics of the soils are presented below in Table 3.6 & Test Results in Table 3.7.

FIGURE 3.7: SOIL SAMPLING LOCATIONS AROUND 10 KM RADIUS



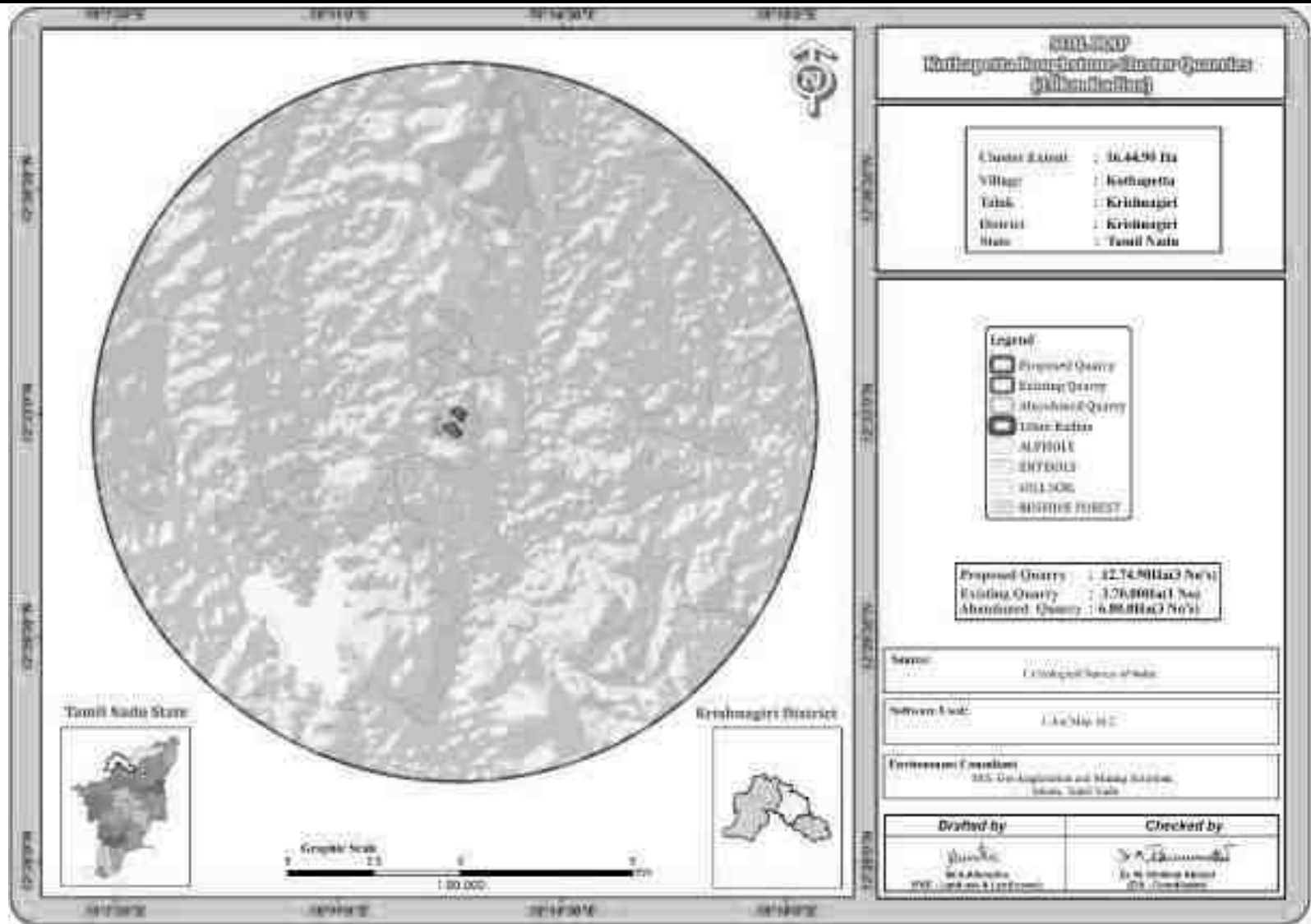


FIGURE 3.8: SOIL MAP

TABLE 3.8 – SOIL QUALITY MONITORING DATA

S.No	Test Parameters	Protocols	S1-Core Zone	S2- Core Zone	S3- Chinimalpalli	S4- Billanakuppam	S5- Peddanapalli	S6- MC Palli
1	pH @ 25°C	IS 2720 Part 26 - 1987 (Reaff:2016)	8.71	8.29	8.05	8.41	7.59	8.09
2	Conductivity @ 25°C	IS 14767 - 2000 (Reaff: 2016)	400 µmhos/cm	515 µmhos/cm	500 µmhos/cm	421 µmhos/cm	477 µmhos/cm	425 µmhos/cm
3	Water Holding Capacity	By Gravimetric Method	45.4 %	45.8 %	46.6 %	46.1 %	48.7 %	46.7 %
4	Bulk Density	By Cylindrical Method	1.05 g/cm ³	1.11 g/cm ³	1.14 g/cm ³	1.10 g/cm ³	0.98 g/cm ³	0.96 g/cm ³
5	Porosity	By Gravimetric Method	42.8 %	44.1 %	45.7 %	45.03 %	46.1 %	45.4 %
6	Calcium as Ca	Food and Agriculture organization of the united Nation Rome 2007 : 2018	97.4 mg/kg	122 mg/kg	92.7 mg/kg	155 mg/kg	101.5 mg/kg	131.7 mg/kg
7	Magnesium as Mg	Food and Agriculture organization of the united Nation Rome 2007 : 2018	55.5 mg/kg	70.4 mg/kg	75.4 mg/kg	70.5 mg/kg	76.2 mg/kg	70.8 mg/kg
8	Chloride as Cl	APHA 23 rd Edn 2019 4500 Cl B	110 mg/kg	87.9 mg/kg	128.1 mg/kg	66.7 mg/kg	88.1 mg/kg	68.5 mg/kg
9	Soluble Sulphate as SO ₄	IS 2720 Part 27 : 1977 (Reaff:2015)	0.015 %	0.0018 %	0.0019 %	0.0069 %	0.0019 %	0.0015 %
10	Total Phosphorus as P	IS 10158 : 1982 (Reaff: 2019)	2.7 mg/kg	1.7 mg/kg	1.8 mg/kg	2.86 mg/kg	2.13 mg/kg	4.1 mg/kg
11	Total Nitrogen as N	IS 14684 : 1999 (Reaff:2019)	352.7 mg/kg	300.2 mg/kg	370.8 mg/kg	381.7 mg/kg	322.4 mg/kg	377.4 mg/kg
12	Organic Matter	IS : 2720 Part 22: 1972 (Reaff: 2015)	1.71 %	1.33 %	2.10 %	2.36 %	2.79 %	2.24 %
13	Organic Carbon	IS : 2720 Part 22: 1972 (Reaff: 2015)	0.99 %	0.77 %	1.22 %	1.37 %	1.62 %	1.30 %
14	Texture :							
	Clay		33.7 %	34.2 %	31.9 %	35.5 %	33.9 %	32.7 %
	Sand		31.1 %	31.9 %	33.3 %	29.8 %	30.3 %	31.5 %
	Silt	Gravimetric Method	35.2 %	33.9 %	34.8 %	34.7 %	35.8 %	35.8 %
15	Manganese as Mn	USEPA 3050 B – 1996 &	21 mg/kg	31.8 mg/kg	24.6 mg/kg	25.5 mg/kg	25.3 mg/kg	22.5 mg/kg
16	Zinc as Zn	USEPA 6010 C - 2000	1.09 mg/kg	2.9 mg/kg	1.29 mg/kg	1.48 mg/kg	1.57 mg/kg	1.64 mg/kg
17	Boron as B		3.9 mg/kg	2.2 mg/kg	2.18 mg/kg	1.9 mg/kg	1.8 mg/kg	1.44 mg/kg
18	Potassium as K		30.5 mg/kg	36 mg/kg	32.7 mg/kg	49.7 mg/kg	32 mg/kg	30.1 mg/kg
19	Cadmium as Cd		BDL (DL : 1.0 mg/kg)	BDL (DL : 1.0 mg/kg)	BDL (DL : 1.0 mg/kg)	BDL (DL : 1.0 mg/kg)	BDL (DL : 1.0 mg/kg)	BDL (DL : 1.0 mg/kg)
20	Total Chromium as Cr		BDL (DL : 1.0 mg/kg)	BDL (DL : 1.0 mg/kg)	BDL (DL : 1.0 mg/kg)	BDL (DL : 1.0 mg/kg)	BDL (DL : 1.0 mg/kg)	BDL (DL : 1.0 mg/kg)
21	Copper as Cu		BDL (DL : 1.0 mg/kg)	BDL (DL : 1.0 mg/kg)	BDL (DL : 1.0 mg/kg)	BDL (DL : 1.0 mg/kg)	BDL (DL : 1.0 mg/kg)	BDL (DL : 1.0 mg/kg)
22	Lead as Pb		0.97 mg/kg	0.55 mg/kg	0.89 mg/kg	0.88 mg/kg	0.81 mg/kg	0.86 mg/kg
23	Iron as Fe		1.77 mg/kg	1.37 mg/kg	1.19 mg/kg	2.76 mg/kg	2.57 mg/kg	2.47 mg/kg
24	Cation Exchange Capacity	USEPA 9080 – 1986	40.4 meq/100g of soil	37.1 meq/100g of soil	41.8 meq/100g of soil	39.5 meq/100g of soil	36.7 meq/100g of soil	43.8 meq/100g of soil

Source: Sampling Results by EHS 360 Labs Private Limited .

Interpretation & Conclusion

Physical Characteristics –

The physical properties of the soil samples were examined for texture, bulk density, porosity and water holding capacity. The soil texture found in the study area is Clay to Sandy Soil and Bulk Density of Soils in the study area varied between 0.96– 1.14 g/cm³. The Water Holding Capacity (45.4-48.7%) and Porosity of the soil samples is found to be medium i.e., ranging from 42.8– 46.1%.

Chemical Characteristics –

- The nature of soil is slightly alkaline to strongly alkaline in nature with pH range 7.59 to 8.71
- The available Nitrogen content range between 300.2 mg/kg to 381.7 mg/kg
- The available Phosphorus content range between 1.7 mg/kg to 4.1 mg/kg
- The available Potassium range between 30.1 mg/kg to 49.7 mg/kg

Whereas, the micronutrient as zinc (Zn), iron (Fe) and copper (Cu) were found in the range of 1.09 to 2.9 mg/kg; 1.19 to 2.76mg/kg.

Wilting co efficient in significant level would mean that the soil would support the vegetation. The soil properties in the buffer zone reveal that the soil can sustain vegetation. If amended suitability the core area can also withstand plantation.

3.2 Water Environment

The water resources, both surface and groundwater play a significant role in the development of the area. The purpose of this study is to assess the water quality characteristics for critical parameters and evaluate the impacts on agricultural productivity, domestic community usage, recreational resources and aesthetics in the vicinity. The water samples were collected and transported as per the norms in pre-treated sampling cans to laboratory for analysis.

3.2.1 Surface Water Resources:

The study area is studded with few tanks that serve as the source of drinking water and also their surplus feeds adjoining tanks. The rainfall over the area is moderate, the rainwater storage in open wells and trenches are in practice over the area and the stored water acts as source of freshwater for couple of months after rainy season.

**TABLE 3.9 – WATER BODIES WITHIN THE CLUSTER FROM PROPOSED QUARRIES P1 to P3
P-1**

S.No	NAME	DISTANCE & DIRECTION	Habitation
1	Odai	120m Odai NE	590m_W
2	Tank	720m NE	
3	Tank	1km SE	
4	Periya Lake	1.2km South	
5	Badethala Lake	1.9Km NE	
6	Marachandiram Lake	2.4Km SE	
7	Stream	2.4Km SE	
8	Krishnagiri Dam	4.5Km SW	
9	Chinneri Lake	7.2Km SE	

10	Ponnaiyar River	7.0Km SW	
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P-2

S.No	NAME	DISTANCE & DIRECTION	Habitation
1	Odai	200m Odai NE	700m_W
2	Tank	560m NE	
3	Tank	860m SE	
4	Periya Lake	1.2km South	
5	Badethala Lake	1.7Km East	
6	Marachandiram Lake	2.2Km SE	
7	Stream	2.2Km SE	
8	Krishnagiri Dam	4.5Km SW	
9	Chinneri Lake	7.0Km SE	
10	Ponnaiyar River	7.2Km SW	

P-3

S.No	NAME	DISTANCE & DIRECTION	Habitation
1	Odai	150m South	210m East
2	Tank	600m SE	
3	Tank	1.2km SE	
4	Periya Lake	1.7km South	
5	Badethala Lake	1.5km East	
6	Marachandiram Lake	2.7Km SE	
7	Stream	2.3Km SE	
8	Krishnagiri Dam	5.0Km SW	
9	Chinneri Lake	7.0Km SE	
10	Ponnaiyar River	7.6Km SW	

Source: Village Cadastral Map and Field Survey, PFR Report

3.2.3 Methodology

Reconnaissance survey was undertaken to collect the sampling and locations were finalized based on;

1. Drainage pattern;
2. Location of residential areas representing different activities/likely impact areas; and
3. Likely areas, which can represent baseline conditions

Two (2) surface water and four (4) ground water samples were collected in the study area and physico-chemical, heavy metals and bacteriological parameters were analysed. The samples were analysed as per the procedures specified by CPCB, IS-10500:2012 and 'Standard methods for the Examination of Water and Waste water' published by American Public Health Association (APHA). The water sampling locations are given in Table 3.8 and shown as Figure 3.5.

TABLE 3.10 – WATER SAMPLING LOCATIONS

S. No	Location code	Monitoring Locations	Distance & Direction	Coordinates
1	SW-1	Badatalav Eri	3km East	12°32'46.24"N 78°14'29.32"E
2	SW-2	Ponnaiyar River	7.8km West	12°31'57.85"N 78° 8'28.48"E
3	WW-1	Chinimalpalli	900m North	12°33'18.83"N 78°12'38.14"E
4	WW-2	Peddanapalli	4.5km SE	12°31'14.65"N 78°14'51.37"E
5	BW-1	Near Project Area	560m West	12°32'34.75"N 78°12'24.61"E
6	BW-2	MC Palli	7.5km NE	12°35'51.29"N 78°15'31.80"E

Source: On-site monitoring/sampling by EHS 360 Labs Private Limited in association with GEMS.

Note: SW- Surface water, WW – Well Water, BW – Bore well

FIGURE 3.9: SITE PHOTOGRAPHS OF WATER SAMPLING LOCATIONS

TABLE 3.11 – SURFACE WATER ANALYSIS RESULTS

SNO	TEST	PROTOCOL	Surface Water (SW-1) - Badatalav Eri	Surface Water (SW-2) – Ponnaiyar River
1	Colour	IS 3025 Part 4:1983 (Reaff:2017)	5 Hazen	5 Hazen
2	Odour	IS 3025 Part 5:2018	Agreeable	Agreeable
3	pH at 25°C	IS 3025 Part 11:1983 (Reaff:2017)	7.73	7.55
4	Conductivity @ 25°C	IS 3025 Part 14:2013 (Reaff:2019)	855 µmhos/cm	718 µmhos/cm
5	Turbidity	IS 3025 Part 10:1984 (Reaff:2017)	4.0 NTU	2.1 NTU
6	Total Dissolved Solids	IS 3025 Part 16:1984 (Reaff:2017)	504 mg/l	423 mg/l
7	Total Hardness as CaCO ₃	IS 3025 Part 21:2009 (Reaff:2019)	181.05 mg/l	156.66 mg/l
8	Calcium as Ca	IS 3025 Part 40:1991 (Reaff:2019)	31.2 mg/l	26.7 mg/l
9	Magnesium as Mg	IS 3025 Part 46:1994 (Reaff:2019)	25.1 mg/l	21.9 mg/l
10	Total Alkalinity as CaCO ₃	IS 3025 Part 23:1986 (Reaff:2019)	141.6 mg/l	130 mg/l
11	Chloride as Cl	IS 3025 Part 32:1988 (Reaff:2019)	118 mg/l	93.8 mg/l
12	Sulphate as SO ₄	IS 3025 Part 24:1986 (Reaff:2019)	67.4 mg/l	51.1 mg/l
13	Iron as Fe	IS 3025 Part 53:2003 (Reaff:2019)	0.26 mg/l	0.24 mg/l
14	Residual Free Chlorine	IS 3025 Part 26:1986 (Reaff:2019)	BDL (DL:0.1 mg/l)	BDL (DL:0.1 mg/l)
15	Fluoride as F	APHA 23 rd Edn. 2017:4500 F,D	0.21 mg/l	0.26 mg/l
16	Nitrate as NO ₃	IS 3025 Part 34:1988 (Reaff:2019)	6.6 mg/l	6.4 mg/l
17	Copper as Cu	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.01 mg/l)	BDL (DL:0.01 mg/l)
18	Manganese as Mn	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)	BDL (DL:0.02 mg/l)
19	Mercury as Hg	USEPA 200.8	BDL (DL:0.0005 mg/l)	BDL (DL:0.0005 mg/l)
20	Cadmium as Cd	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.001 mg/l)	BDL (DL:0.001 mg/l)
21	Selenium as Se	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)	BDL (DL:0.005 mg/l)
22	Aluminium as Al	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)	BDL (DL:0.005 mg/l)
23	Lead as Pb	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)	BDL (DL:0.005 mg/l)
24	Zinc as Zn	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)	BDL(DL : 0.05 mg/l)
25	Total Chromium as Cr	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.02 mg/l)	BDL(DL : 0.02 mg/l)
26	Boron as B	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)	BDL(DL : 0.05 mg/l)
27	Mineral Oil	IS 3025 Part 39-1991 (Reaff. 2019)	BDL(DL : 0.01 mg/l)	BDL(DL : 0.01 mg/l)
28	Phenolic compounds as C ₆ H ₅ OH	IS 3025 Part 43-1992(Reaff: 2019)	BDL (DL:0.0005 mg/l)	BDL (DL:0.0005 mg/l)
29	Anionic Detergents (as MBAS)	IS 13428 – 2005 (Reaff:2019) (Annex K)	BDL (DL:0.01 mg/l)	BDL (DL:0.01 mg/l)
30	Cyanide as CN	IS 3025 Part 27-1986 (Reaff. 2019)	BDL (DL:0.01 mg/l)	BDL (DL:0.01 mg/l)
31	BOD @ 27°C for 3 days	IS 3025 Part 44:1993 (Reaff:2019)	8.9 mg/l	6.6 mg/l
32	Chemical Oxygen Demand	IS 3025 Part 58:2006 (Reaff:2017)	44 mg/l	32 mg/l
33	Dissolved Oxygen	IS 3025 Part 38:1989 (Reaff:2019)	5.2 mg/l	5.7 mg/l
34	Barium as Ba	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL:0.05 mg/l)	BDL(DL:0.05 mg/l)
35	Ammonia (as total ammonia-N)	IS 3025 Part 34-1988 (Reaff. 2019)	2.1 mg/l	1.7 mg/l
36	Sulphide as H ₂ S	IS 3025 Part 29-1986 (Reaff: 2019)	BDL (DL:0.01 mg/l)	BDL (DL:0.01 mg/l)
37	Molybdenum as Mo	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)	BDL (DL:0.02 mg/l)
38	Total Arsenic as As	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)	BDL (DL:0.005 mg/l)
39	Total Suspended Solids	IS 3025 Part 17 -1984 (Reaff:2017)	18.7 mg/l	18.7 mg/l
40	Total Coliform	APHA 23rd Edn. 2017:9221B	650 MPN/100ml	600 MPN/100ml
41	<i>Escherichia coli</i>	APHA 23rd Edn. 2017:9221F	120 MPN/100ml	80 MPN/100ml

Note : APHA – American Public Health Association, BDL – Below Detection Limit, DL – Detection Limit, MPN – Most Probable Number

TABLE 3.12 – GROUND WATER ANALYSIS RESULTS

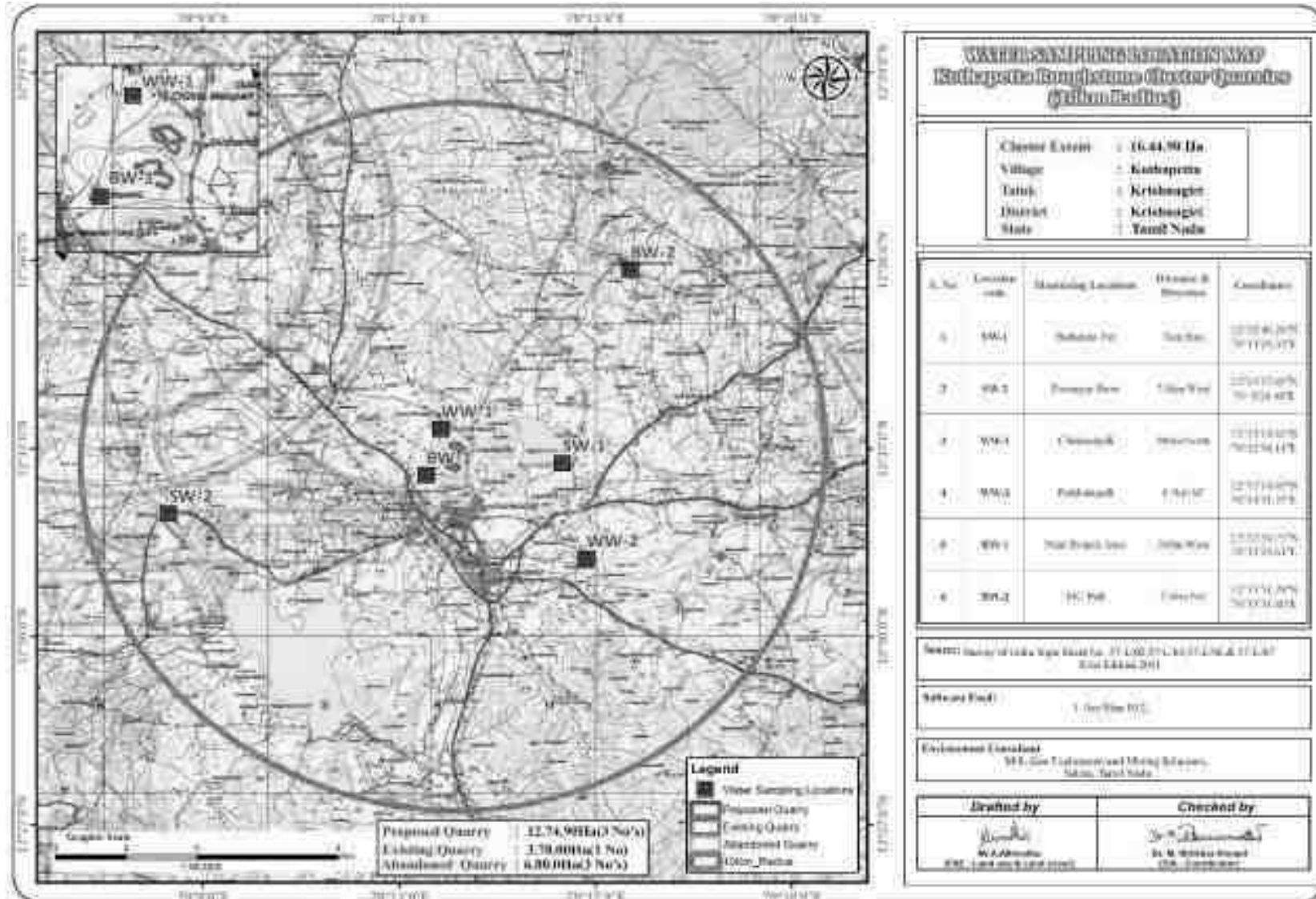
Sno	Test	Protocol	Ground Water (WW1) – Chinimalpalli	Ground Water (WW-2) – Peddanapalli	Ground Water (BW-1) – Near Project Area	Ground Water (BW2) – MC Palli
1	Colour	IS 3025 Part 4:1983 (Reaff:2017)	5	5	5	5
2	Odour	IS 3025 Part 5:2018	Agreeable	Agreeable	Agreeable	Agreeable
3	pH at 25°C	IS 3025 Part 11:1983 (Reaff:2017)	7.01	7.97	7.09	7.83
4	Conductivity @ 25°C	IS 3025 Part 14:2013 (Reaff:2019)	680 µmhos/cm	969 µmhos/cm	815 µmhos/cm	897 µmhos/cm
5	Turbidity	IS 3025 Part 10:1984 (Reaff:2017)	1.1 NTU	1.5 NTU	1.2 NTU	1.2 NTU
6	Total Dissolved Solids	IS 3025 Part 16:1984 (Reaff:2017)	401 mg/l	572 mg/l	480 mg/l	529 mg/l
7	Total Hardness as CaCO ₃	IS 3025 Part 21:2009 (Reaff:2019)	145.62 mg/l	184.44 mg/l	161.77 mg/l	194.24 mg/l
8	Calcium as Ca	IS 3025 Part 40:1991 (Reaff:2019)	25.9 mg/l	31.9 mg/l	27.1 mg/l	32.7 mg/l
9	Magnesium as Mg	IS 3025 Part 46:1994 (Reaff:2019)	19.7 mg/l	25.5 mg/l	22.9 mg/l	27.4 mg/l
10	Total Alkalinity as CaCO ₃	IS 3025 Part 23:1986 (Reaff:2019)	112 mg/l	170 mg/l	161 mg/l	163 mg/l
11	Chloride as Cl	IS 3025 Part 32:1988 (Reaff:2019)	76.5 mg/l	122.1 mg/l	97.5 mg/l	110 mg/l
12	Sulphate as SO ₄	IS 3025 Part 24:1986 (Reaff:2019)	47 mg/l	81 mg/l	68.2 mg/l	51.4 mg/l
13	Iron as Fe	IS 3025 Part 53:2003 (Reaff:2019)	0.35 mg/l	0.18 mg/l	0.41 mg/l	0.17 mg/l
14	Residual Free Chlorine	IS 3025 Part 26:1986 (Reaff:2019)	BDL (DL:0.1 mg/l)	BDL (DL:0.1 mg/l)	BDL (DL:0.1 mg/l)	BDL (DL:0.1 mg/l)
15	Fluoride as F	APHA 23 rd Edn. 2017:4500 F,D	0.15 mg/l	0.19 mg/l	0.38 mg/l	0.15 mg/l
16	Nitrate as NO ₃	IS 3025 Part 34:1988 (Reaff:2019)	5.5 mg/l	5.1 mg/l	5.1 mg/l	4.1 mg/l
17	Copper as Cu	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.01 mg/l)	BDL (DL:0.01 mg/l)	BDL (DL:0.01 mg/l)	BDL (DL:0.01 mg/l)
18	Manganese as Mn	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)	BDL (DL:0.02 mg/l)	BDL (DL:0.02 mg/l)	BDL (DL:0.02 mg/l)
19	Mercury as Hg	USEPA 200.8	BDL (DL:0.0005 mg/l)	BDL (DL:0.0005 mg/l)	BDL (DL:0.0005 mg/l)	BDL (DL:0.0005 mg/l)
20	Cadmium as Cd	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.001 mg/l)	BDL (DL:0.001 mg/l)	BDL (DL:0.001 mg/l)	BDL (DL:0.001 mg/l)
21	Selenium as Se	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)	BDL (DL:0.005 mg/l)	BDL (DL:0.005 mg/l)	BDL (DL:0.005 mg/l)
22	Aluminium as Al	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)	BDL (DL:0.005 mg/l)	BDL (DL:0.005 mg/l)	BDL (DL:0.005 mg/l)
23	Lead as Pb	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)	BDL (DL:0.005 mg/l)	BDL (DL:0.005 mg/l)	BDL (DL:0.005 mg/l)
24	Zinc as Zn	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)	BDL(DL : 0.05 mg/l)	BDL(DL : 0.05 mg/l)	BDL(DL : 0.05 mg/l)
25	Total Chromium as Cr	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.02 mg/l)	BDL(DL : 0.02 mg/l)	BDL(DL : 0.02 mg/l)	BDL(DL : 0.02 mg/l)
26	Boron as B	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)	BDL(DL : 0.05 mg/l)	BDL(DL : 0.05 mg/l)	BDL(DL : 0.05 mg/l)
27	Mineral Oil	IS 3025 Part 39-1991 (Reaff. 2019)	BDL(DL : 0.01 mg/l)	BDL(DL : 0.01 mg/l)	BDL(DL : 0.01 mg/l)	BDL(DL : 0.01 mg/l)
28	Phenolic compounds as C ₆ H ₅ OH	IS 3025 Part 43-1992(Reaff: 2019)	BDL (DL:0.0005 mg/l)	BDL (DL:0.0005 mg/l)	BDL (DL:0.0005 mg/l)	BDL (DL:0.0005 mg/l)
29	Anionic Detergents (as MBAS)	IS 13428 – 2005 (Reaff:2019) (Annex K)	BDL (DL:0.01 mg/l)	BDL (DL:0.01 mg/l)	BDL (DL:0.01 mg/l)	BDL (DL:0.01 mg/l)
30	Barium as Ba	IS 3025 Part 27-1986 (Reaff. 2019)	BDL(DL:0.05 mg/l)	BDL(DL:0.05 mg/l)	BDL(DL:0.05 mg/l)	BDL(DL:0.05 mg/l)
31	Ammonia (as total ammonia-N)	IS 3025 Part 44:1993 (Reaff:2019)	BDL (DL:0.01 mg/l)	BDL (DL:0.01 mg/l)	BDL (DL:0.01 mg/l)	BDL (DL:0.01 mg/l)
32	Sulphide as H ₂ S	IS 3025 Part 58:2006 (Reaff:2017)	BDL (DL:0.01 mg/l)	BDL (DL:0.01 mg/l)	BDL (DL:0.01 mg/l)	BDL (DL:0.01 mg/l)
33	Molybdenum as Mo	IS 3025 Part 38:1989 (Reaff:2019)	BDL (DL:0.02 mg/l)	BDL (DL:0.02 mg/l)	BDL (DL:0.02 mg/l)	BDL (DL:0.02 mg/l)
34	Total Arsenic as As	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)	BDL (DL:0.005 mg/l)	BDL (DL:0.005 mg/l)	BDL (DL:0.005 mg/l)
35	Total Suspended Solids	IS 3025 Part 17 -1984 (Reaff:2017)	BDL (DL:1.0 mg/l)	BDL (DL:1.0 mg/l)	BDL (DL:1.0 mg/l)	BDL (DL:0.005 mg/l)
36	Total Coliform	APHA 23 rd Edn. 2017:9221B	170 MPN/100ml	100 MPN/100ml	129 MPN/100ml	160 MPN/100ml
37	Escherichia coli	APHA 23 rd Edn. 2017:9221F	< 1.8 MPN/100ml	< 1.8 MPN/100ml	< 1.8 MPN/100ml	< 1.8 MPN/100ml

Note : APHA – American Public Health Association, BDL – Below Detection Limit, DL – Detection Limit, MPN – Most Probable Number

* IS: 10500:2012-Drinking Water Standards; # within the permissible limit as per the WHO Standard. The water can be used for drinking purpose in the absence of alternate sources. Note: SW- Surface water, GW – Ground water.

Source: Sampling Results by EHS 360 Labs Private Limited.

FIGURE 3.10: WATER SAMPLING LOCATIONS AROUND 10 KM RADIUS



3.2.4 Interpretation & Conclusion

Surface Water

The pH of surface 7.55-7.73 while turbidity found within the standards. Total Dissolved Solids 423-504mg/l and Chloride 93.8-118mg/l. Nitrates 6.4-6.6 mg/l, while sulphates 51.1-67.4mg/l.

Ground Water

The pH of the water samples collected ranged from 7.01 to 7.97 and within the acceptable limit of 6.5 to 8.5. pH, Sulphates and Chlorides of water samples from all the sources are within the limits as per the Standard. On Turbidity, the water samples meet the requirement. Total Dissolved Solids were found in the range of 401–572mg/l in all samples. The Total hardness varied between 145.62 – 194.24 mg/l for all samples.

On Microbiological parameters, the water samples from all the locations meet the requirement. The parameters thus analysed were compared with IS 10500:2012 and are well within the prescribed limits.

3.2.5 Hydrology and Hydrogeological studies

The district is underlain by hard rock formation Fissured and Fractured crystalline rocks constitute the important aquifer systems in the district. Geophysical prospecting was carried out in that area by SSRMP-ATS Instrument by qualified Geo physicist with the help of IGIS software and it was inferred that the low resistance encountered at the depth between 31-45m Bgl. the quarrying operations is restricted upto 45m hence there is no possibilities of water table intersection during the entire mine life period besides it is also inferred topographically that there are no major water bodies intersecting the project area. There is no necessity of stream, channel diversion due to this upcoming project.

During the rainy season there is a possibility of collection of seepage water from the subsurface levels this is due to the high intensity of fracture and weathered portion upto a depth of 31-45m thus the collected seepage water will be stored in the mine sump pits and will be used for dust suppression and greenbelt development and during the end of the life of the mine this collected water will be as a temporary reservoir in that area.

3.2.6 Ground Water Resources:

Krishnagiri district is underlain entirely by Archaean Crystalline formations with Recent alluvial deposits occurring along the river and streams courses and colluvium of valley-fills. The important aquifer systems in the district are constituted by weathered, fissured and fractured crystalline rocks and the recent alluvial deposits.

Ground water occurs under phreatic conditions. The maximum saturated thickness of these aquifers is upto 5 m depending upon the topographic conditions. The study area falls in the Kothapetta which is categorized as Safe (< 70%) as per G.O (MS) No 113 dated 09.06.2016.

There are eight open wells and Eight Bore wells within the radius of 1km Most of the wells are almost in dry conditions: - The details of the well and depth in monsoon and non-monsoon is described below:

TABLE 3.13: POST MONSOON WATER LEVEL OF OPEN WELLS 1 KM RADIUS

S.No	Name	LONGITUDE	LATITUDE	Oct-23	Nov-23	Dec-23
1	OW1	12° 33' 15.05"N	78° 12' 16.12"E	11	11.6	12.2
2	OW2	12° 33' 24.54"N	78° 12' 31.34"E	11.2	11.8	12.4
3	OW3	12° 33' 29.64"N	78° 12' 46.52"E	11.4	12	12.6
4	OW4	12° 33' 32.82"N	78° 13' 01.31"E	11.1	11.7	12.3
5	OW5	12° 33' 05.38"N	78° 13' 17.83"E	11.6	12.2	12.8
6	OW6	12° 32' 33.43"N	78° 13' 16.78"E	11.8	12.4	13
7	OW7	12° 32' 35.07"N	78° 12' 27.24"E	11.5	12.1	12.7
8	OW8	12° 33' 00.89"N	78° 12' 15.31"E	11.3	11.9	12.5

FIGURE 3.11: CONTOUR MAP OF OPEN WELL WATER LEVEL

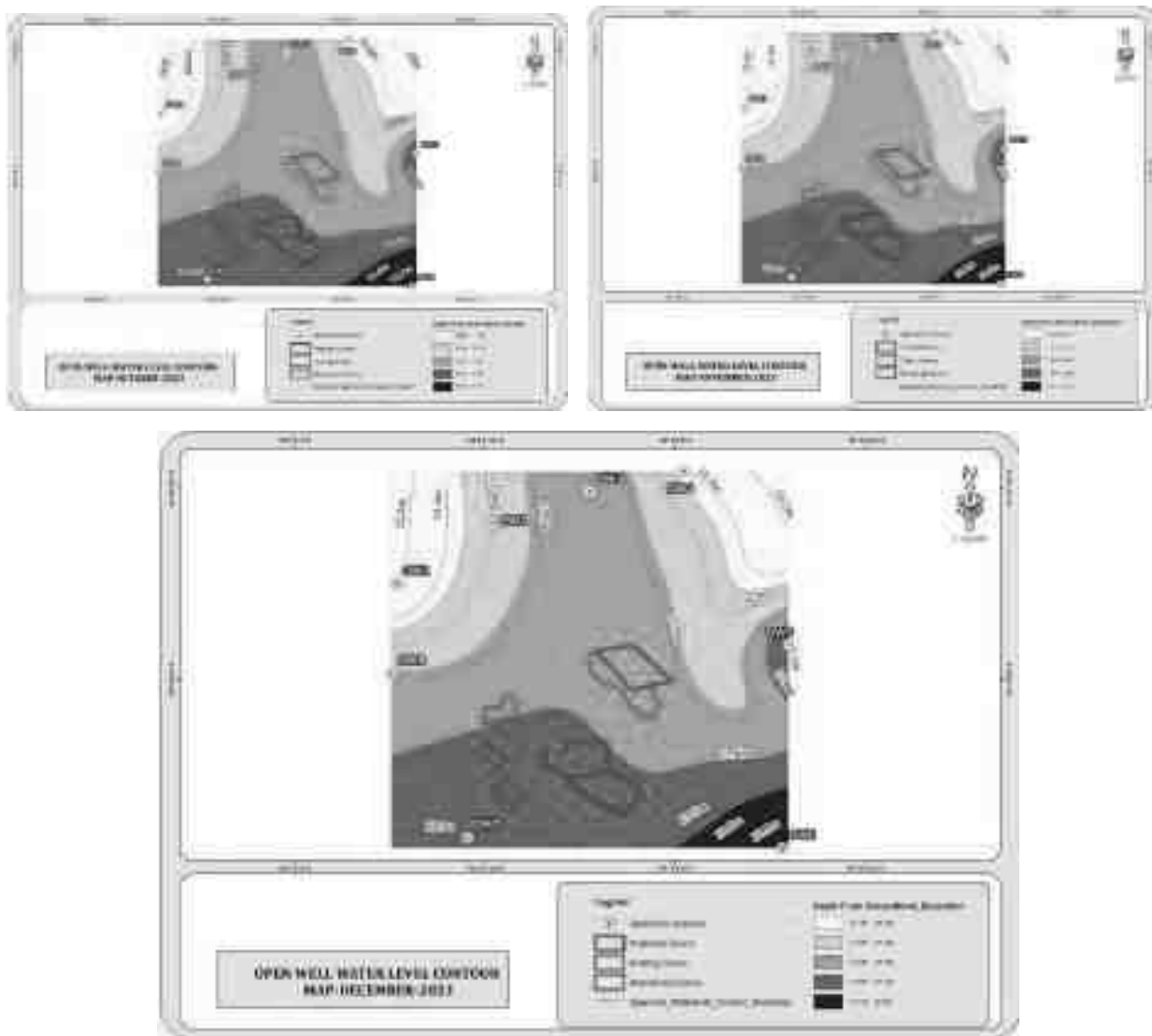


TABLE 3.14: POST MONSOON WATER LEVEL OF BOREWELLS 1 KM RADIUS

S.No	LABEL	LATITUDE	LONGITUDE	Oct-23	Nov-23	Dec-23
1	BW1	12° 32' 55.81"N	78° 12' 20.27"E	56	56.6	57.2
2	BW2	12° 33' 19.77"N	78° 12' 32.62"E	56.3	56.9	57.5
3	BW3	12° 33' 16.24"N	78° 12' 49.64"E	56.4	57	57.6
4	BW4	12° 33' 20.37"N	78° 13' 08.63"E	56.1	56.7	57.3
5	BW5	12° 33' 00.51"N	78° 13' 08.91"E	56.9	57.5	58.1
6	BW6	12° 32' 16.04"N	78° 13' 08.13"E	56.2	56.8	57.4
7	BW7	12° 32' 13.82"N	78° 12' 29.66"E	56.5	57.1	57.7
8	BW8	12° 32' 23.83"N	78° 12' 18.86"E	56.7	57.3	57.9

FIGURE 3.12: CONTOUR MAP OF BORE WELL WATER LEVEL

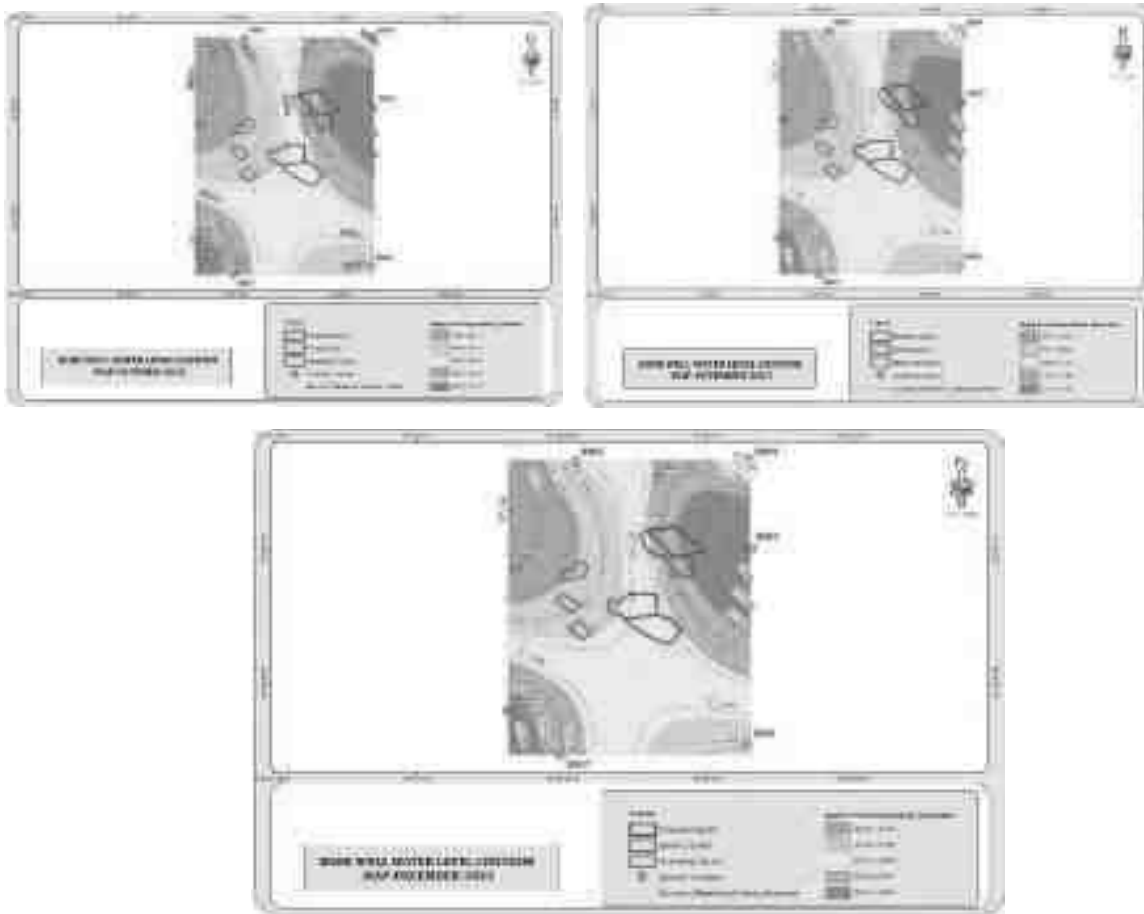


FIGURE 3.13: DRAINAGE MAP AROUND 10 KM RADIUS FROM PROJECT SITE

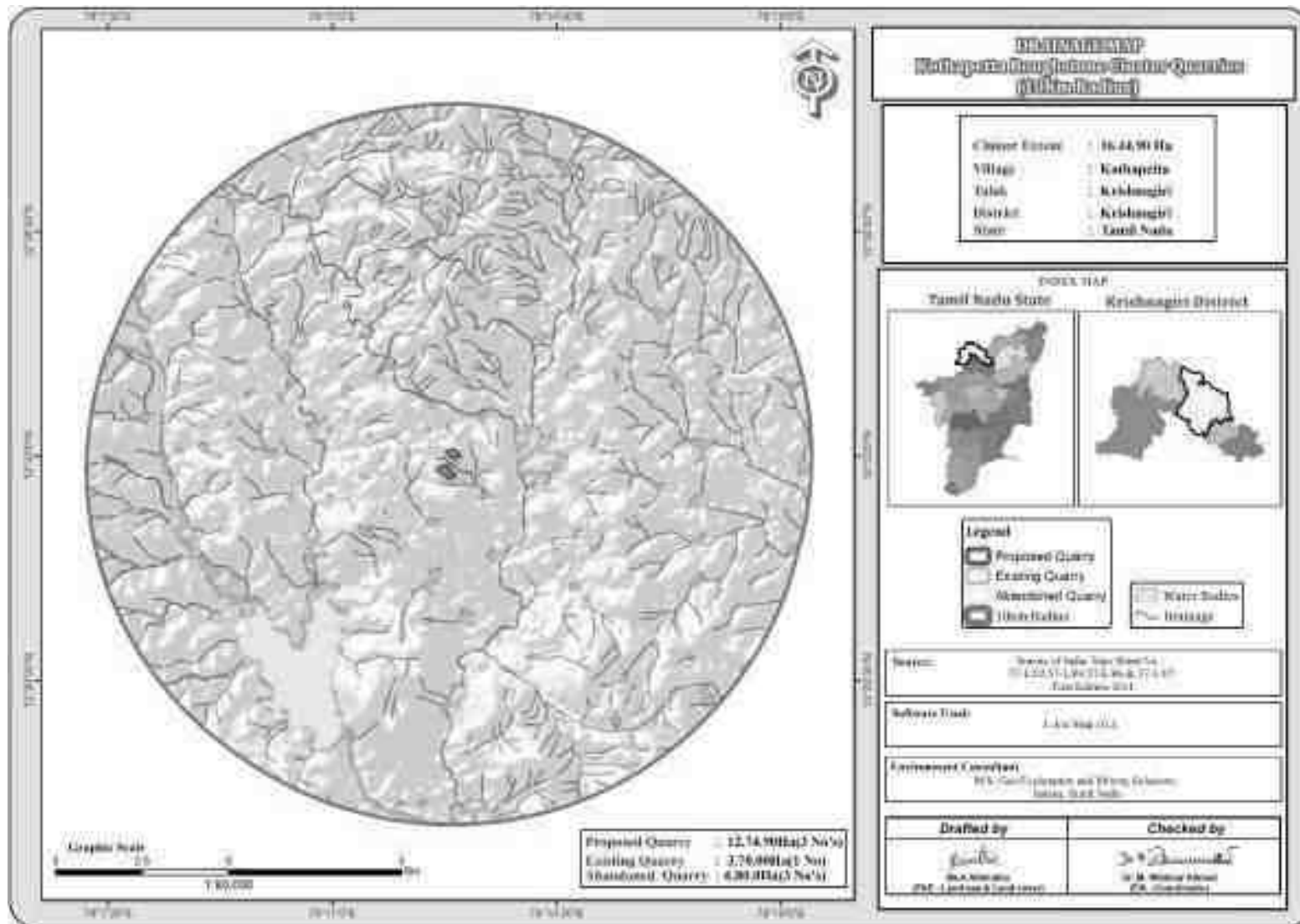
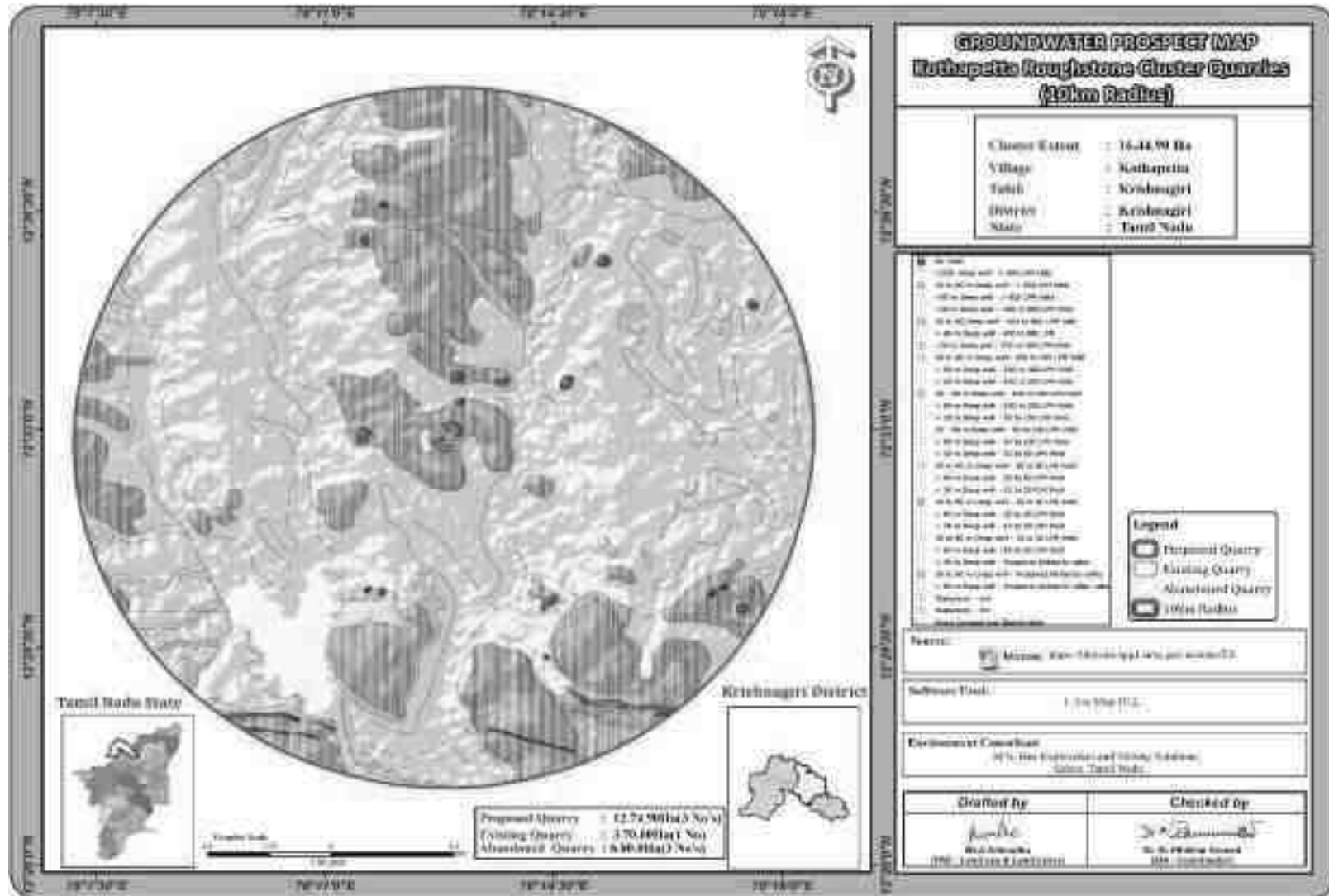


FIGURE 3.14: GROUND WATER PROSPECTS MAP



Source : Bhuvan

3.2.6 Methodology and Data Acquisition

Electric Resistivity Method is well established for delineating lateral as well vertical discontinuities in the resistive structure of the Earth's subsurface. The present study makes use of vertical electric sounding (VES) to delineate the Vertical Resistivity structure at depth. Schlumberger electrode set up was employed for making sounding measurements. Since it is least influenced by lateral in homogeneities and is capable of providing higher depth of investigation. This is four electrodes collinear set up where in the outer electrodes send current into the ground and the inner electrodes measure the potential difference.

The present study utilizes maximum current electrode separation $AB/2$. The data from this survey are commonly arranged and contoured in the form of Pseudo-section that gives an approximate of the subsurface resistivity. This technique is used for the inversion of Schlumberger VES data to predict the layer parameter namely layer resistivity and Geo electric layer thickness. The main goal of the present study is to search the vertical in homogeneities that is consistent with the measured data.

For a Schlumberger among the Apparent resistivity can be calculated as follows

$$\rho_a = \frac{G\Delta V}{I}$$

ΔV = potential difference between receiving electrodes

G = Geometric Factor.

Rocks show wide variation in resistivity ranging from 10⁻⁸ more than 10⁺¹⁴ ohmmeter. On a broad classification, one can group the rocks falling in the range of 10⁻⁸ to 1 ohmmeter as good conductors. 1 to 10⁶ ohmmeter as intermediate conductors and 10⁶ to 10¹² ohmmeter as more as poor conductor. The resistivity of rocks and subsurface lithology, which is mostly dependent on its porosity and the pore fluid resistivity is defined by Archie's Law,

$$\rho_r = F\rho_w = a \emptyset^m \rho_w$$

ρ_r = Resistivity of Rocks

ρ_w = Resistivity of water in pores of rock

F = Formation Factor

\emptyset = Fractional pore volume

A = Constants with values ranging from 0.5 to 2.5

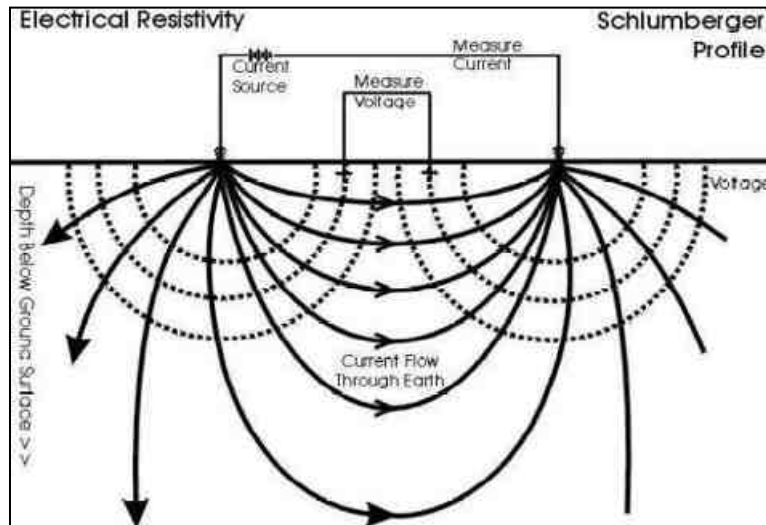
3.2.7 Survey Layout

The layout for a resistivity survey depends on the choice of the current and potential electrode arrangement, which is called electrode array. Here the present study is considered with Schlumberger array. In which the distance may be used for current electrode separation while potential electrode separation is kept on third to one fifth of the same. One interesting aspect in VES is the principle of reciprocity, which permits interchange of the potential and current electrode without any effect on the measured apparent resistivity.

The field equipment deployed for the study is in a deep resistivity meter with a model of SSRMP ATS this Signal stacking Resistivity meter is a high-quality data acquisition system incorporating several innovation features for Earth resistivity. In the presence of random earth Noises the signal to noise ration can be enhanced by \sqrt{N} where N

is the number of stacked readings. This SSR meter in which running averages of measurements $[1, (1+2)/2, (1+2+3)/3 \dots (1+2+\dots+16/16)]$ up to the chosen stacks are displayed and the final average is stored automatically, in memory utilizing the principles of stacking to achieve the benefit of high signals to noise ratio. Based on these above significations the signal stacking resistivity meter was used for (VES) Vertical Electric Resistivity Sounding.

RESISTIVITY SURVEY PROFILE



Measurements of ground Resistivity is essentially done by sending a current through two electrodes called current electrodes (C_1 & C_2) and measuring the resulting potential by two other electrodes called potential electrode (P_1 & P_2). The amount of current required to be sent into the ground depends on the contact resistance at the current electrode, the ground resistivity and the depth of interest.

3.2.8 Data Presentation

It was inferred that the low resistance encountered at the depth between 31-45m Bgl. The maximum depth proposed out of proposed projects is 31-45m BGL. Hence there is no possibilities of water table intersection during the entire mine life period besides it is also inferred topographically that there are no major water bodies intersecting the project area.

3.2.9 Geophysical Data Interpretation

The geophysical data was obtained to study the lateral variations, vertical in homogeneities in the sub – surface with respect to the availability of groundwater. From the interpreted data, it has inferred that the area has moderate groundwater potential in the investigated area. This small quarrying operation will not have any significant impact on the natural water bodies.

3.3 Air Environment

The ambient air quality with respect to the study area of 10 km radius including the cluster quarries forms the baseline information. The prime objective of baseline air quality monitoring is to assess existing air quality of the area. This will also be useful in assessing the conformity to standards of the ambient air quality during the operations

The existing ambient air quality of the area is important for evaluating the impact of mining activities on the ambient air quality. These will also be useful for assessing the conformity to standards of the ambient air quality during the proposed quarries within the radius of 500m.

The sources of air pollution in the region are mostly due to vehicular traffic, dust arising from unpaved village road and domestic & agricultural activities. This section describes the identification of sampling locations, methodology adopted during the monitoring period and sampling frequency.

The baseline status of the ambient air quality has been assessed through scientifically designed ambient air quality network. The design of monitoring network in the air quality surveillance program has been based on the following considerations:

- Meteorological conditions.
- Topography of the study area.
- Likely impact area.

3.3.1 Meteorology & Climate

Meteorology is the key to understand the air quality. The essential relationship between meteorological condition and atmospheric dispersion involves the wind in the broadest sense. Wind fluctuations over a very wide range of time, accomplish dispersion and strongly influence other processes associated with them.

A temporary meteorological station was installed at project site. The station was installed at a height of 4 m above the ground level in such a way that there are no obstructions facilitating flow of wind, wind speed, wind direction, humidity and temperature are recorded on hourly basis.

Climate

- The climate is tropical in Krishnagiri. In Krishnagiri, the quantity of rainfall during summers surpasses that of winters. This climate is considered to be Aw according to the Köppen-Geiger climate classification. The temperature here averages 25.5 °C | 77.9 °F. The annual precipitation in this location is approximately 773 mm | 30.4 inch.
- Krishnagiri are in the middle of our planet and the summers are not easy to define. The optimal period to plan a visit would be during the months of January, February, March, April, May, June, July, August, September, October, November.
- The driest month is February. There is 6 mm | 0.2 inch of precipitation in February. On average, the highest amount of rainfall occurs during October with a mean value of 144 mm | 5.7 inch.
- With an average of 29.0 °C | 84.2 °F, April is the warmest month. On average, the month of December is considered to be the coldest time of year with temperatures averaging at around 21.9 °C | 71.4 °F.

<https://en.climate-data.org/asia/india/tamil-nadu/krishnagiri-34157>

Rainfall

The average annual rainfall and the 5 years rainfall is as follows:

TABLE 3.15 – RAINFALL DATA

Actual Rainfall in mm					Normal Rainfall in mm
2017	2018	2019	2020	2021	
1145.6	510.4	730.0	798.6	985.4	985

Source: <https://www.twadboard.tn.gov.in/content/Krishnagiri>

TABLE 3.16 – METEOROLOGICAL DATA RECORDED AT SITE

S.No	Parameters		Oct-2023	Nov-2023	Dec-2023
1	Temperature (°C)	Max	26.4	24.85	24.44
		Min	22.88	21.62	19.48
		Avg	24.64	23.23	21.96
2	Relative Humidity (%)	Avg	75.78	85.87	85.5
3	Wind Speed (m/s)	Max	4.73	4.16	4.59
		Min	0.95	1.89	1.17
		Avg	2.84	3.02	2.88
4	Cloud Cover (OKTAS)		0-8	0-8	0-8
5	Wind Direction		E, ENE	ENE,E	ENE,NE

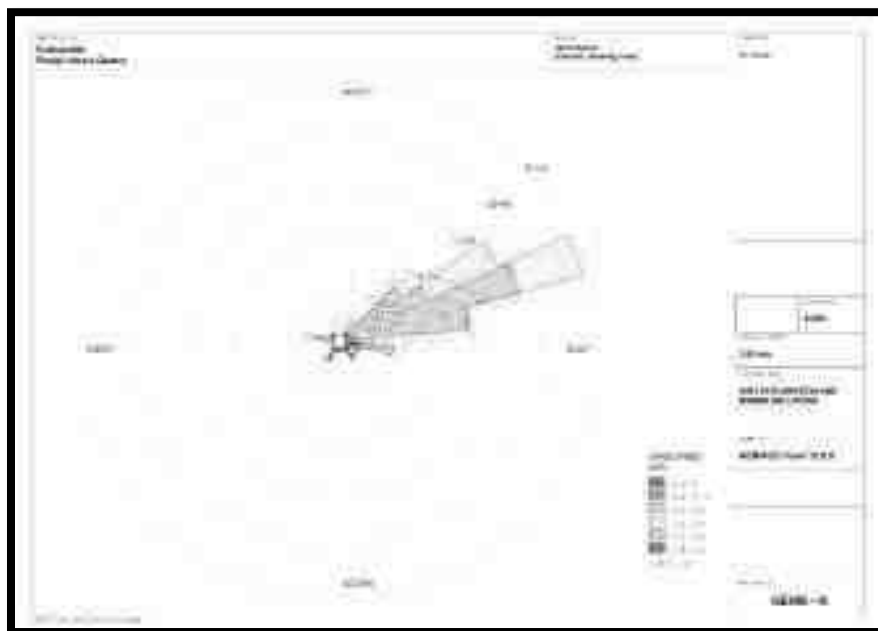
Source: On-site monitoring/sampling by EHS 360 Labs Private Limited in association with GEMS

3.3.2 Correlation between Secondary and Primary Data

The meteorological data collected at the site is almost similar to that of secondary data collected from IMD Krishnagiri. A comparison of site data generated during the three months with that of IMD, Krishnagiri Agro reveals the following:

- The average maximum and minimum temperatures of IMD, Krishnagiri agro showed a higher in respect of on-site data i.e. in Kothapetta village.
- The relative humidity levels were lesser at site as compared to IMD, Krishnagiri agro.
- The wind speed and direction at site shows similar trend that of IMD, Krishnagiri agro.

Windrose diagram of the study site is depicted in Figure. 3.8. Predominant downwind direction of the area during study season is North East to South West.

FIGURE 3.15: WINDROSE DIAGRAM

Environmental In the abstract of collected data wind rose were drawn on presented in figure No.3.15 during the monitoring period in the study area

1. Predominant winds were from E, ENE,
2. Wind velocity readings were recorded between 0.50 to 5.70 km / hour
3. Calm conditions prevail of about 0.00% of the monitoring period
4. Temperature readings ranging from 19.48 to 26.4°C
5. Relative humidity ranging from 75.78 to 85.87%
6. The monitoring was carried out continuously for three months

3.3.3 Methodology and Objective

The prime objective of the ambient air quality study is to assess the existing air quality of study area and its conformity to NAAQS. The observed sources of air pollution in the study area are industrial, traffic and domestic activities. The baseline status of the ambient air quality has been established through a scientifically designed ambient air quality monitoring network considering the followings:

- Meteorological condition on synoptic scale;
- Topography of the study area;
- Representatives of regional background air quality for obtaining baseline status;
- Location of residential areas representing different activities;
- Accessibility and power availability; etc

3.3.4 Sampling and Analytical Techniques

TABLE 3.17 – METHODOLOGY AND INSTRUMENT USED FOR AIR QUALITY ANALYSIS

Parameter	Method	Instrument
PM _{2.5}	Gravimetric Method Beta attenuation Method	Fine Particulate Sampler Make – Thermo Environmental Instruments – TEI 121
PM ₁₀	Gravimetric Method Beta attenuation Method	Respirable Dust Sampler Make –Thermo Environmental Instruments – TEI 108
SO ₂	IS-5182 Part II (Improved West & Gaeke method)	Respirable Dust Sampler with gaseous attachment
NO _x	IS-5182 Part II (Jacob & Hochheiser modified method)	Respirable Dust Sampler with gaseous attachment
Free Silica	NIOSH – 7601	Visible Spectrophotometry

Source: Sampling Methodology followed by EHS 360 Labs Private Limited & CPCB Notification

TABLE 3.18 – NATIONAL AMBIENT AIR QUALITY STANDARDS

Sl. No.	Pollutant	Time Weighted Average	Concentration in ambient air	
			Industrial, Residential, Rural & other areas	Ecologically Sensitive area (Notified by Central Govt.)
1	Sulphur Dioxide ($\mu\text{g}/\text{m}^3$)	Annual Avg.* 24 hours**	50.0 80.0	20.0 80.0
2	Nitrogen Dioxide ($\mu\text{g}/\text{m}^3$)	Annual Avg. 24 hours	40.0 80.0	30.0 80.0
3	Particulate matter (size less than 10 μm) PM ₁₀ ($\mu\text{g}/\text{m}^3$)	Annual Avg. 24 hours	60.0 100.0	60.0 100.0
4	Particulate matter (size less than 2.5 μm) PM _{2.5} ($\mu\text{g}/\text{m}^3$)	Annual Avg. 24 hours	40.0 60.0	40.0 60.0

Source: NAAQS CPCB Notification No. B-29016/20/90/PCI-I Dated: 18th Nov 2009

*Annual Arithmetic mean of minimum 104 measurements in a year taken twice a Week 24 hourly at uniform interval.

** 24 hourly / 8 hourly or 1 hourly monitored value as applicable shall be complied with 98 % of the time in a year. However, 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

3.3.5 Frequency & Parameters for Sampling

Ambient air quality monitoring has been carried out with a frequency of two samples per week at Eight (8) locations, adopting a continuous 24 hourly (3 shift of 8-hour) schedule for the period Mar2023-May2023. The baseline data of ambient air has been generated for PM₁₀, PM_{2.5}, Sulphur Dioxide (SO₂) & Nitrogen Dioxide (NO₂).

3.3.6 Ambient Air Quality Monitoring Stations

Seven (7) monitoring stations were set up in the study area as depicted in Figure 3.17 for assessment of the Proposed ambient air quality. Details of the sampling locations are as per given below.

TABLE 3.19 – AMBIENT AIR QUALITY (AAQ) MONITORING LOCATIONS

S. No	Location Code	Monitoring Locations	Distance & Direction	Coordinates
1	AAQ-1	Core Zone	Project Area	12°32'41.10"N 78°12'49.36"E
2	AAQ-2	Core Zone	Project Area	12°32'49.86"N 78°12'45.83"E
3	AAQ-3	Chinimalpalli	900m North	12°33'17.89"N 78°12'54.04"E
4	AAQ-4	Billanakuppam	5.8km NW	12°34'53.26"N 78°10'10.90"E
5	AAQ-5	Peddnapalli	4.5km SE	12°31'11.06"N 78°14'48.75"E
6	AAQ-6	MC Palli	7.5km NE	12°35'52.76"N 78°15'30.55"E
7	AAQ-7	Pedattalapalli	4km SW	12°31'16.87"N 78°11'2.16"E

Source: On-site monitoring/sampling by EHS 360 Labs Private Limited in association with GEMS

FIGURE 3.16: SITE PHOTOGRAPHS OF AMBIENT AIR MONITORING



Source: Monitoring photographs from the FAE and Team Members

FIGURE 3.17 AMBIENT AIR QUALITY LOCATIONS AROUND 10 KM RADIUS

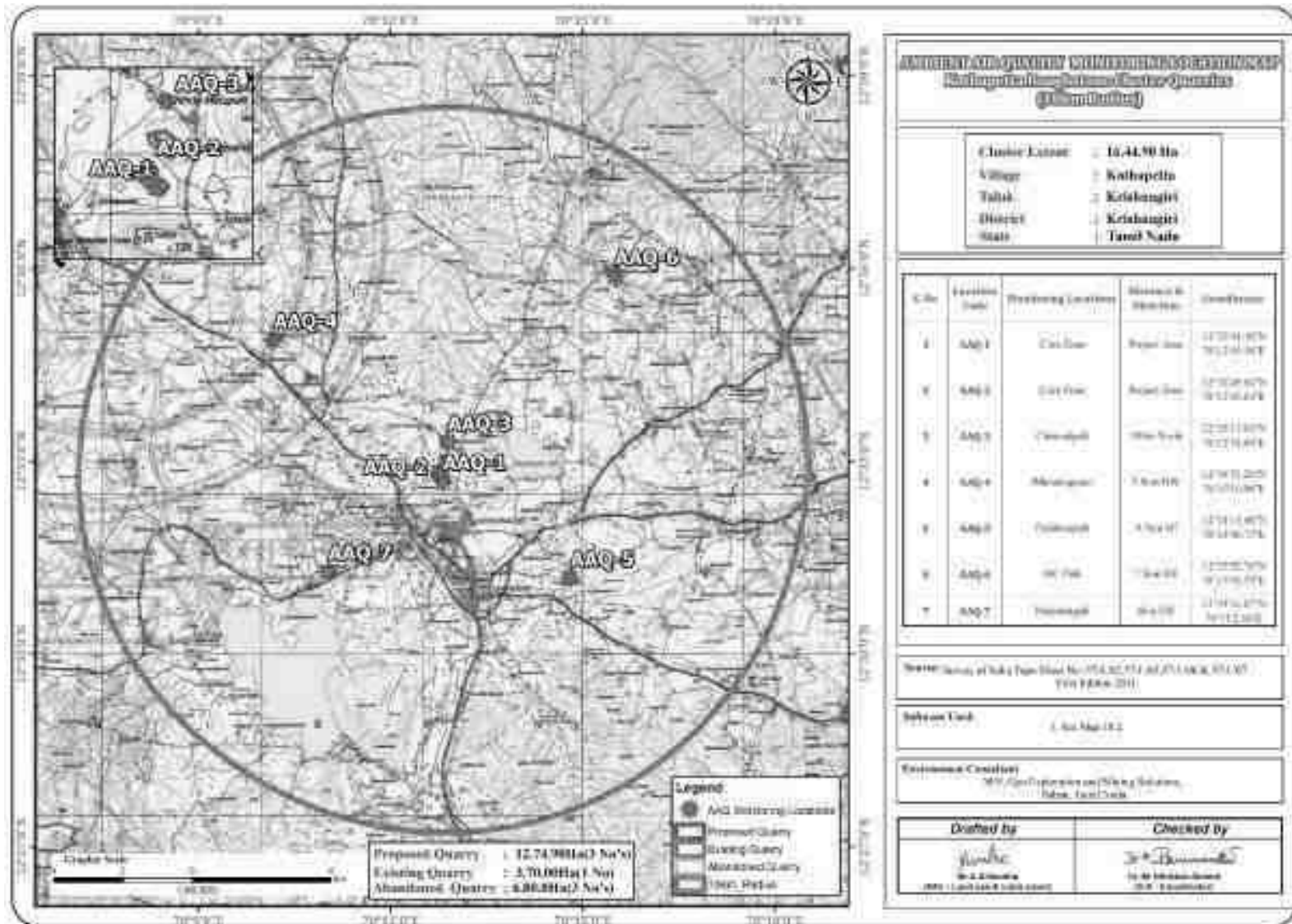


TABLE 3.20: SUMMARY OF AAQ1-AAQ7

PM10	AAQ1	AAQ2	AAQ3	AAQ4	AAQ5	AAQ6	AAQ7
Arithmetic Mean	40.8	41.7	42.8	43.1	41.4	41.4	42.9
Minimum	39.1	40.1	41.7	41.8	39.2	40.6	41.5
Maximum	43.6	43.6	43.6	44.8	43.7	45.2	44.7
NAAQ Norms	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PM2.5	AAQ1	AAQ2	AAQ3	AAQ4	AAQ5	AAQ6	AAQ7
Arithmetic Mean	18.9	21.6	21.2	21.1	41.4	43.0	19.3
Minimum	17.6	19.4	20.2	20.1	20.1	19.1	17.2
Maximum	19.9	23.9	22.7	21.9	23.8	20.9	21.6
NAAQ Norms	60.0	60.0	60.0	60.0	60.0	60.0	60.0
SO₂	AAQ1	AAQ2	AAQ3	AAQ4	AAQ5	AAQ6	AAQ7
Arithmetic Mean	6.2	6.1	7.8	7.5	9.1	5.9	6.0
Minimum	5.1	5.1	6.2	6.2	6.1	4.4	5.1
Maximum	7.4	7.2	8.9	8.9	7.9	7.8	7.3
NAAQ Norms	80.0	80.0	80.0	80.0	80.0	80.0	80.0
NO₂	AAQ1	AAQ2	AAQ3	AAQ4	AAQ5	AAQ6	AAQ7
Arithmetic Mean	20.6	21.4	21.2	21.5	21.2	21.4	21.2
Minimum	19.1	19.1	19.3	19.2	19.1	19.9	19.1
Maximum	22.8	22.7	23.4	23.4	23.5	22.8	25.6
NAAQ Norms	80.0	80.0	80.0	80.0	80.0	80.0	80.0

TABLE 3.21 – ABSTRACT OF AMBIENT AIR QUALITY DATA

1	Parameter	PM10	PM2.5	SO₂	NO₂
2	98 th Percentile Value	45.1	23.8	8.9	23.6
3	Arithmetic Mean	42.7	21.0	7.0	21.6
4	Geometric Mean	42.7	21.0	6.9	21.6
5	Standard Deviation	1.5	1.6	1.1	1.4
6	Minimum	40.2	18.6	5.4	19.5
7	Maximum	45.1	23.8	8.9	23.6
8	NAAQ Norms*	100.0	60.0	80.0	80.0
	% Values exceeding Norms*	0.0	0.0	0.0	0.0

Legend: PM_{2.5}-Particulate Matter size less than 2.5 µm; PM₁₀-Respirable Particulate Matter size less than 10 µm; SO₂-Sulphur dioxide; NO₂-Nitrogen Dioxide; CO-Carbon monoxide; O₃-Ozone; NH₃-Ammonia; Pb-Particulate Lead; As-Particulate Arsenic; Ni-Particulate Nickel; C₆H₆-Benzene & BaP- Benzo (a) pyrene in particulate phase levels were monitored below their respective detectable limits.

* NAAQ Norms-National Ambient Air Quality Norms-Revised as per GSR 826(E) dated 16.11.2009 for Industrial, Residential, Rural and other Area.

FIGURE 3.18: BAR DIAGRAM OF SUMMARY OF AAQ 1 – AAQ 7

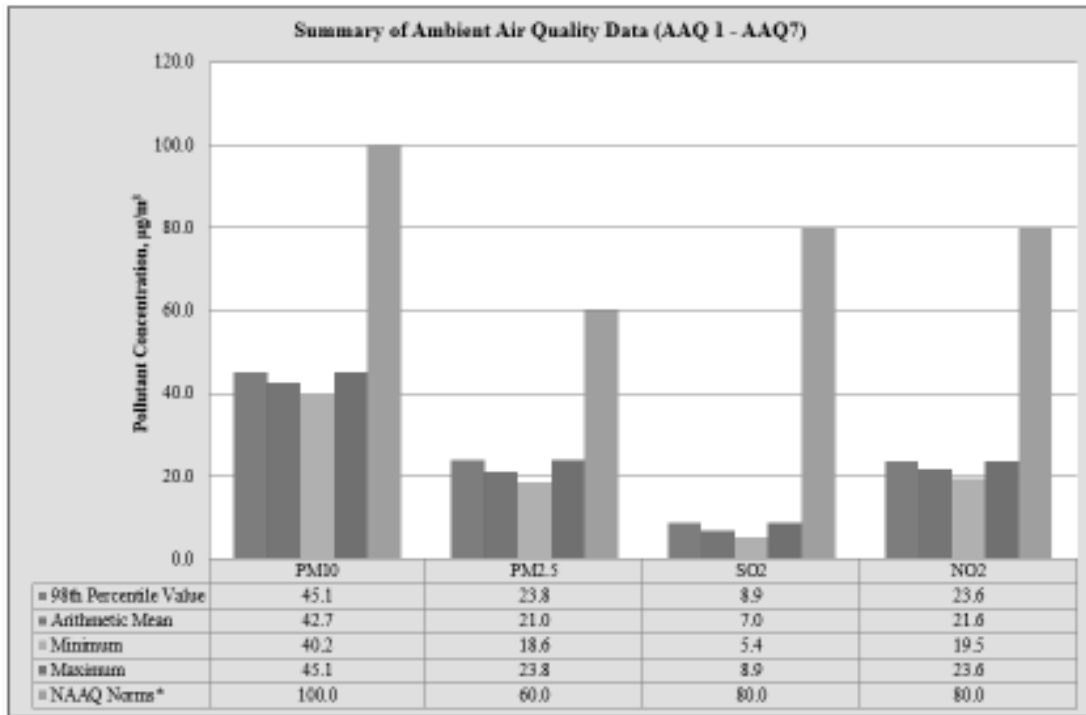


FIGURE 3.19 : BAR DIAGRAM OF PARTICULATE MATTER (PM₁₀)

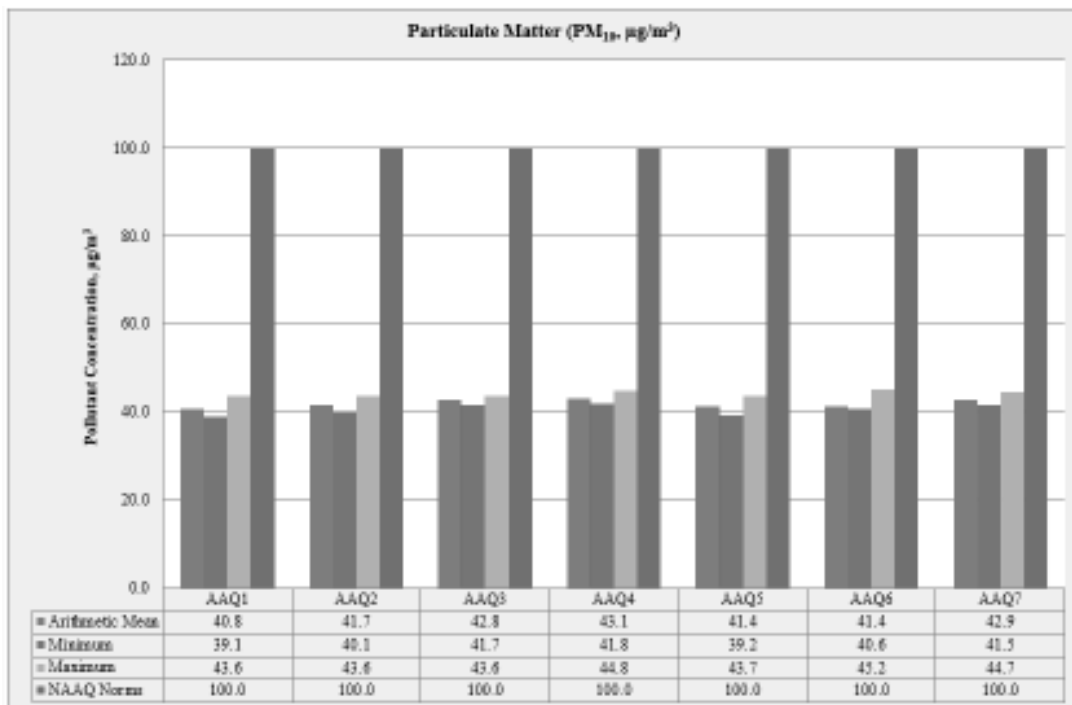


FIGURE 3.20 : BAR DIAGRAM OF PARTICULATE MATTER (PM_{2.5})

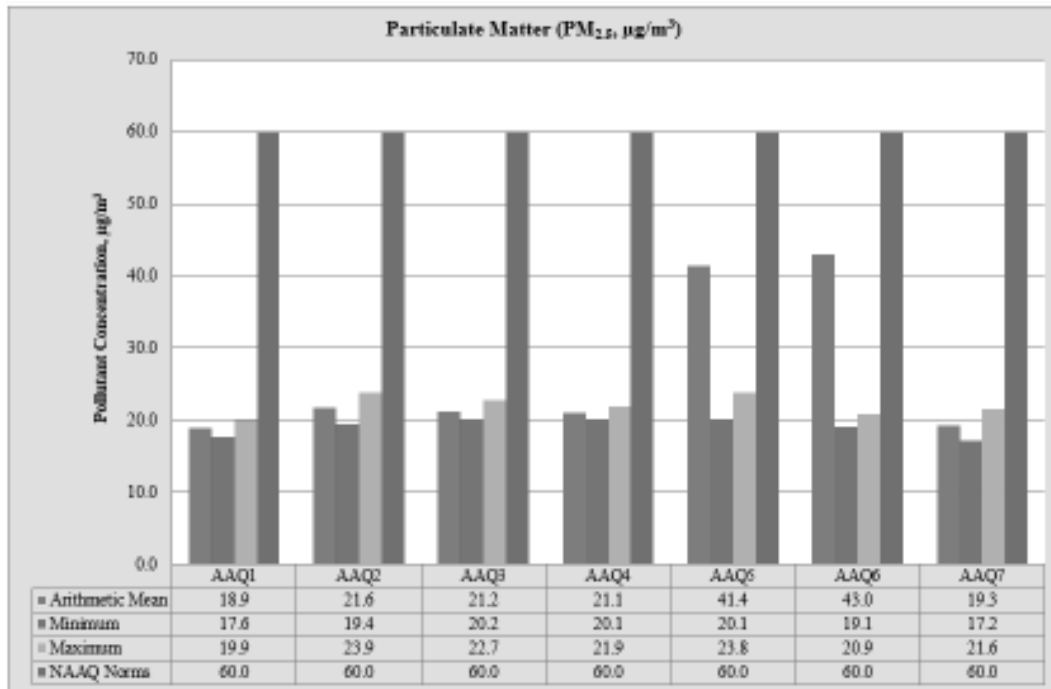


FIGURE 3.21: BAR DIAGRAM OF PARTICULATE MATTER (SO₂)

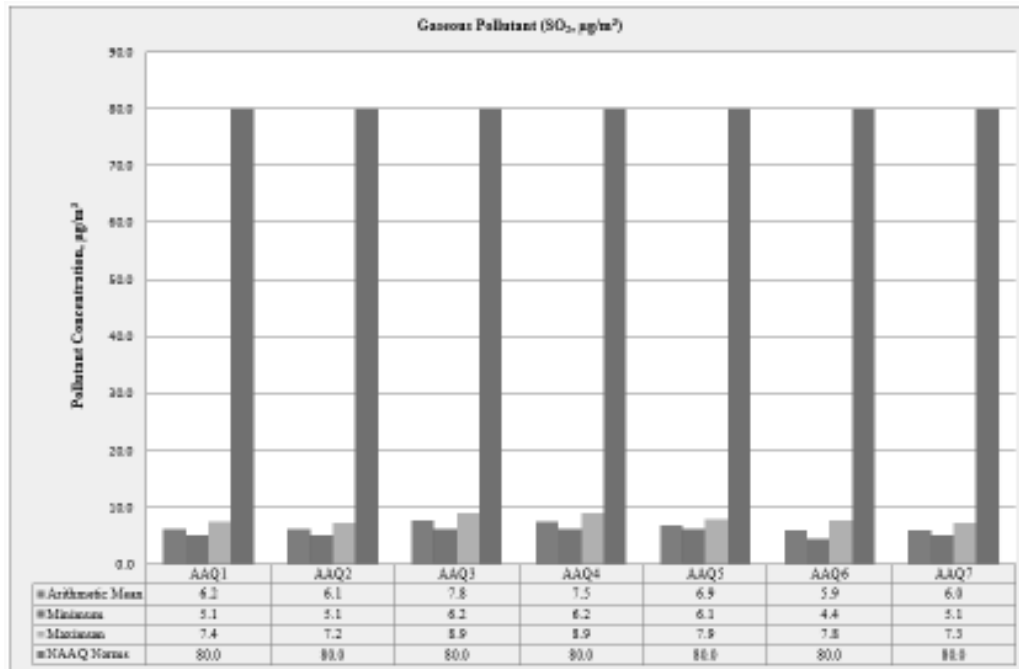
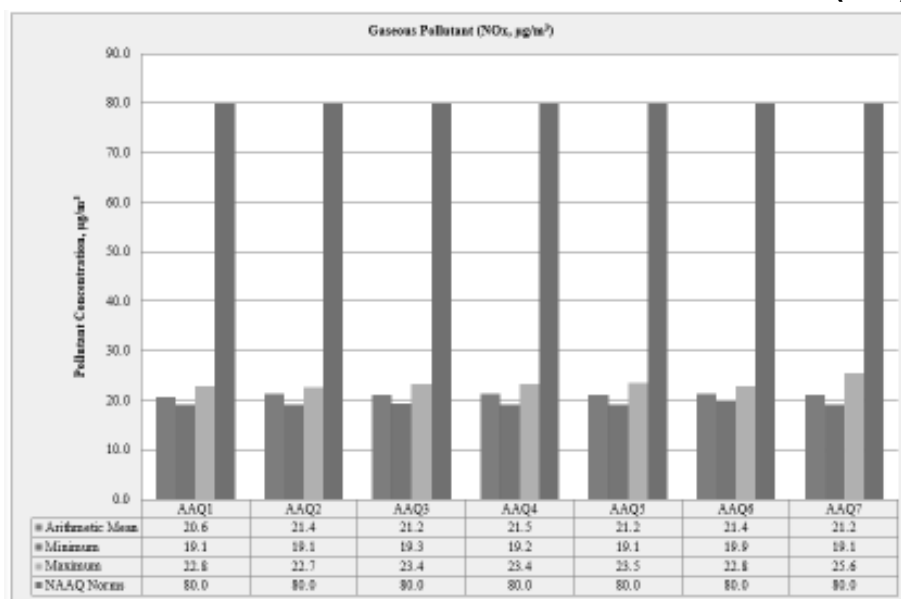


FIGURE 3.22: BAR DIAGRAM OF PARTICULATE MATTER (NO₂)

3.3.6 Interpretations & Conclusion

As per monitoring data, PM₁₀ ranges from 39.1 µg/m³ to 45.2 µg/m³, PM_{2.5} data ranges from 17.2 µg/m³ to 23.9 µg/m³, SO₂ ranges from 4.4 µg/m³ to 8.9 µg/m³ and NO₂ data ranges from 19.1 µg/m³ to 25.6 µg/m³. The concentration levels of the above criteria pollutants were observed to be well within the limits of NAAQS prescribed by CPCB.

The minimum & maximum concentrations of PM₁₀ were found to be 39.1 µg/m³ in Core area & 45.2 µg/m³ in MC Palli Village respectively. The minimum & maximum concentrations of PM_{2.5} were found to be 17.2 µg/m³ in Pedattalapalli Village & 23.9 µg/m³ in core area respectively. The maximum concentration in the core zone is due to the cluster of quarries situated within 500m radius.

3.3.7 FUGITIVE DUST EMISSION

Fugitive dust was recorded at 7AAQ monitoring stations for 30 days average during the study period.

TABLE 3.22– AVERAGE FUGITIVE DUST SAMPLE VALUES IN µg/m³

AAQ Locations	Avg SPM (µg/m ³)
AAQ 1	61.18
AAQ 2	62.70
AAQ 3	65.94
AAQ 4	65.33
AAQ 5	63.47
AAQ 6	63.64
AAQ 7	63.42

Source: Line Diagram of Table 3.29

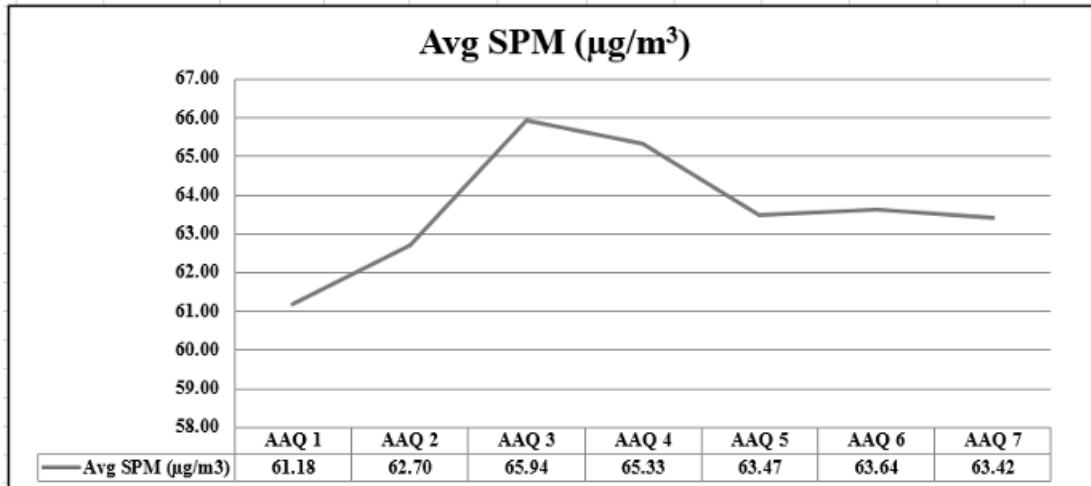
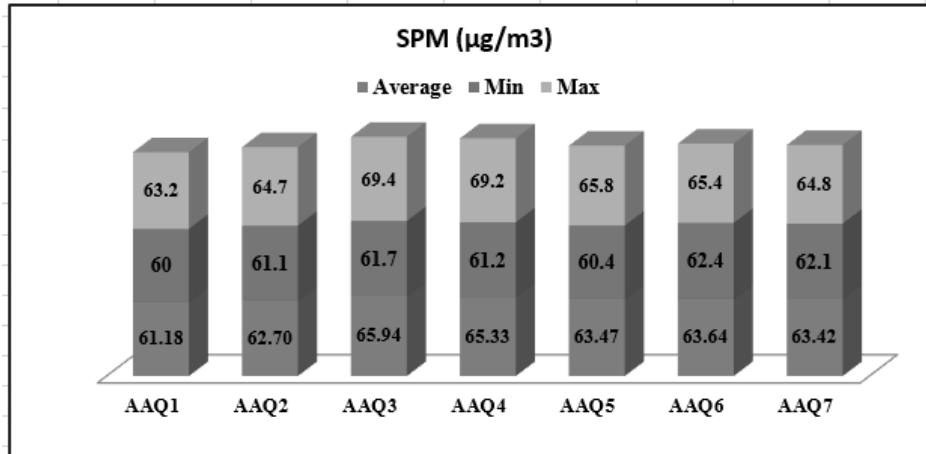


TABLE 3.23– FUGITIVE DUST SAMPLE VALUES IN µg/m³

SPM (µg/m ³)	AAQ1	AAQ2	AAQ3	AAQ4	AAQ5	AAQ6	AAQ7
Average	61.18	62.70	65.94	65.33	63.47	63.64	63.42
Min	60	61.1	61.7	61.2	60.4	62.4	62.1
Max	63.2	64.7	69.4	69.2	65.8	65.4	64.8

Source: Calculations from Lab Analysis Reports



Source: Bar Diagram of table 3.30

3.4 Noise Environment

The vehicular movement on road and mining activities is the major sources of noise in study area, the environmental assessment of noise from the mining activity and vehicular traffic can be undertaken by taking into consideration various factors like potential damage to hearing, physiological responses, and annoyance and general community responses.

The main objective of noise monitoring in the study area is to establish the baseline noise level and assess the impact of the total noise expected to be generated during the project operations around the project site.

3.4.1 Identification of Sampling Locations

In order to assess the ambient noise levels within the study area, noise monitoring was carried out at seven (7) locations. The noise level monitoring locations were carried out by covering commercial, residential, rural areas within the radius of 10km. A noise monitoring methodology was chosen such that it best suited the purpose and objectives of the study.

TABLE 3.24 – DETAILS OF SURFACE NOISE MONITORING LOCATIONS

S. No	Location code	Monitoring Locations	Distance & Direction	Coordinates
1	N-1	Core Zone	Project Area	12°32'41.19"N 78°12'50.32"E
2	N-2	Core Zone	Project Area	12°32'49.88"N 78°12'46.54"E
3	N-3	Chinimalpalli	900m North	12°33'17.99"N 78°12'53.89"E
4	N-4	Billanakuppam	5.8km NW	12°34'53.18"N 78°10'11.25"E
5	N-5	Peddanapalli	4.5km SE	12°31'11.27"N 78°14'48.85"E
6	N-6	MC Palli	7.5km NE	12°35'52.63"N 78°15'30.59"E
7	N-7	Pedattalapalli	4km SW	12°31'16.93"N 78°11'2.39"E

Source: On-site monitoring/sampling by EHS 360 Labs Private Limited in association with GEMS

FIGURE 3.23: SITE PHOTOGRAPHS OF NOISE MONITORING IN CLUSTER



3.4.2 Method of Monitoring

Digital Sound Level Meter was used for the study. All reading was taken on the 'A-Weighting' frequency network, at a height of 1.5 meters from ground level. The sound level meter does not give a steady and consistent reading and it is quite difficult to assess the actual sound level over the entire monitoring period. To mitigate this shortcoming, the Continuous Equivalent Sound level, indicated by Leq, is used. Equivalent sound level, 'Leq', can be obtained from variable sound pressure level, 'L', over a time period by using following equation.

$$Leq = 10 \log L / T \sum (10L_n/10)$$

Where L = Sound pressure level at function of time dB (A)

T = Time interval of observation

3.4.3 Analysis of Ambient Noise Level in the Study Area

An analysis of the different Leq data obtained during the study period has been made. Variation was noted during the day-time as well as night-time. The results are presented in below Table 3.6

Day time : 6:00 hours to 22.00 hours.

Night time : 22:00 hours to 6.00 hours

TABLE 3.25 – NOISE MONITORING RESULTS IN CORE AND BUFFER ZONE

S. No	Locations	Noise level (dB (A) Leq)		Ambient Noise Standards
		Day Time	Night Time	
1	Core Zone	41.5	34.7	Industrial Day Time- 75 dB (A) Night Time- 70 dB (A)
2	Core Zone	40.3	35.1	
3	Chinimalpalli	42.3	33.2	
4	Billanakuppam	41.1	35.2	
5	Peddanapalli	40.5	34.2	Residential Day Time– 55 dB (A) Night Time- 45 dB (A)
6	MC Palli	39.2	34.2	
7	Pedattalapalli	38.3	34.5	

Source: On-site monitoring/sampling by EHS360 Labs Private Limited in association with GEMS.

FIGURE 3.24: NOISE MONITORING STATIONS AROUND 10 KM RADIUS

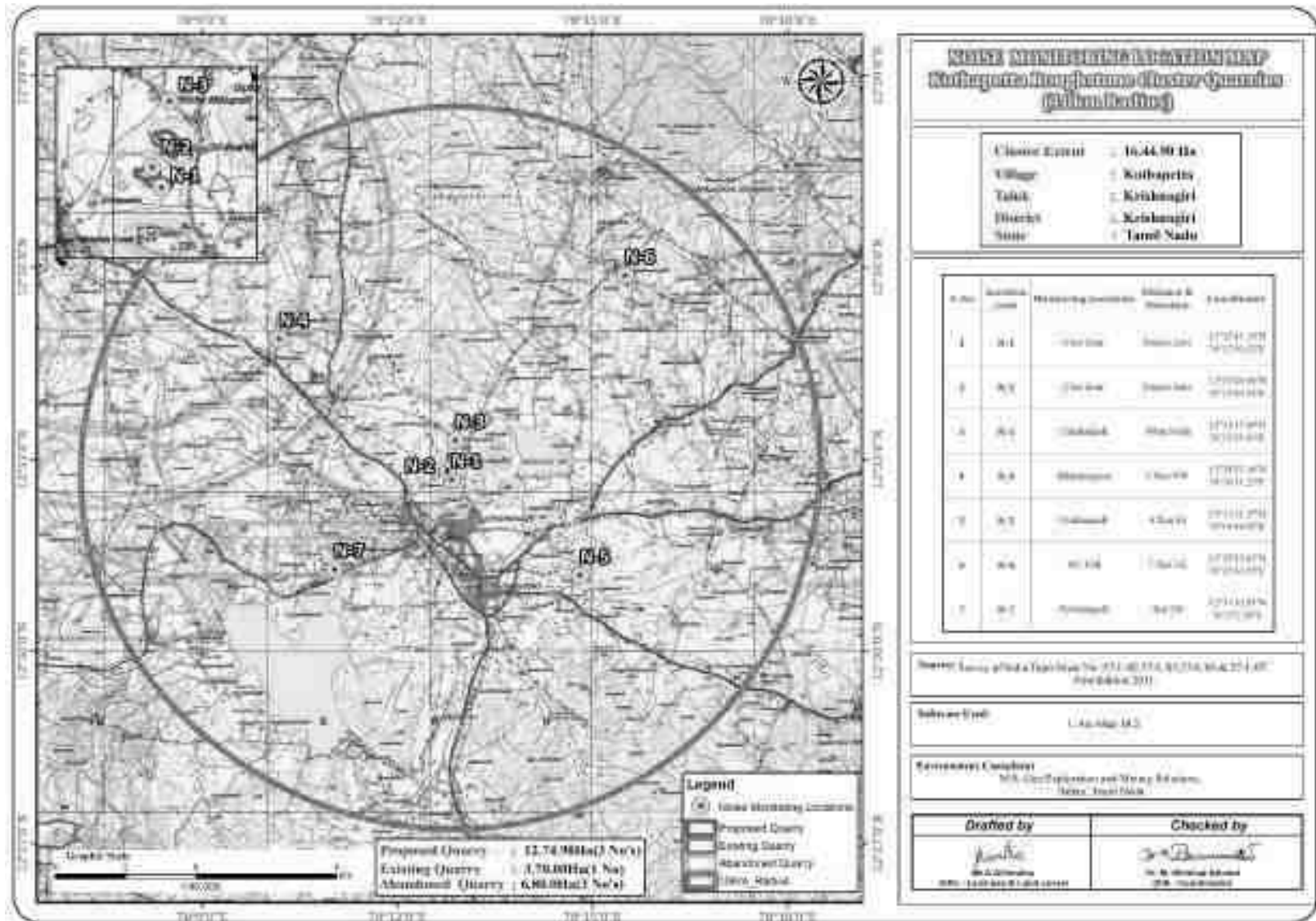
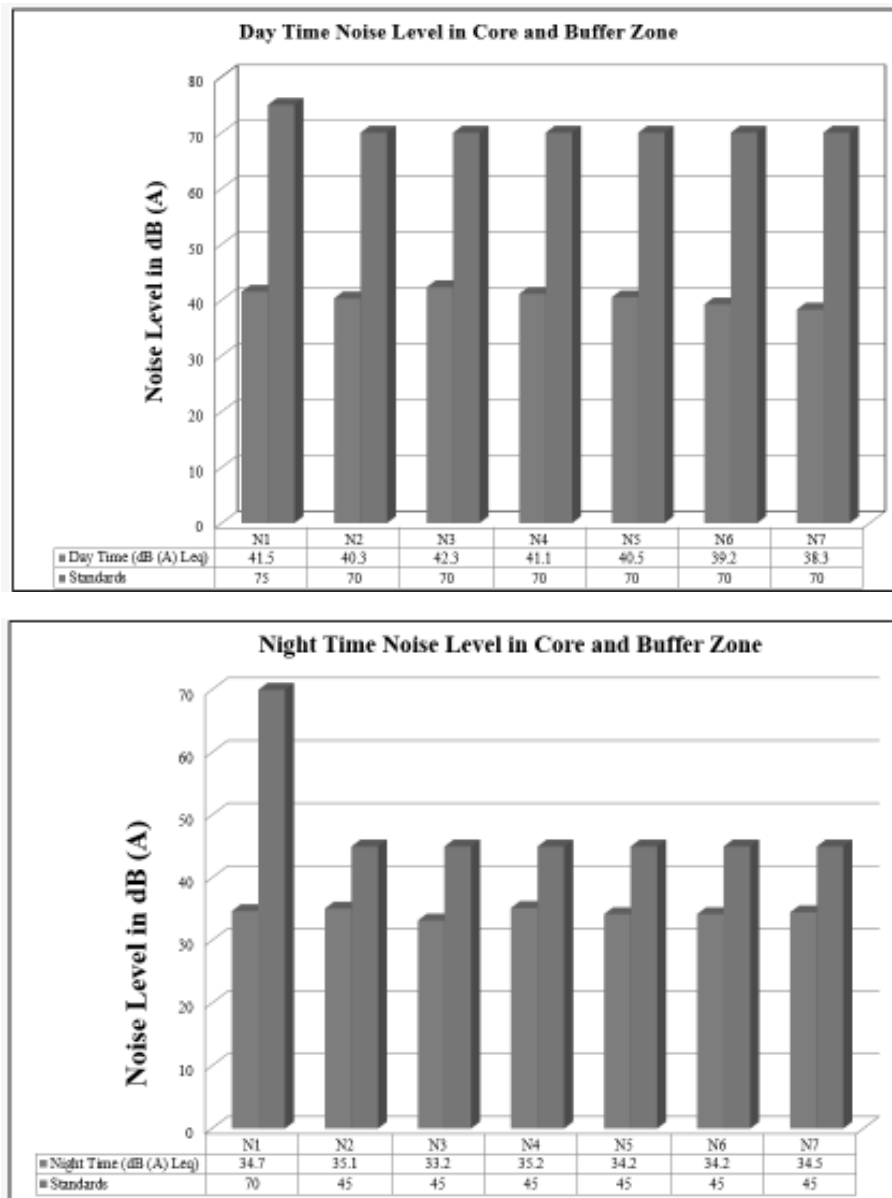


FIGURE 3.25: DAY & NIGHT TIME NOISE LEVELS IN CORE AND BUFFER ZONE



3.4.4 Interpretation & Conclusion:

Ambient noise levels were measured at 7 (Seven) locations around the project area considering cluster quarries. Noise levels recorded in core zone during day time were from 40.3-41.5 dB (A) Leq and during night time were from 34.7-35.1 (A) Leq. Noise levels recorded in buffer zone during day time were from 38.3 – 42.3 dB (A) Leq and during night time were from 33.2– 35.2 dB (A) Leq.

The values of noise observed in some of the areas are primarily owing to quarrying activities due to cluster of quarries within 500m radius, movement of vehicles and other anthropogenic activities. Noise monitoring results reveal that the maximum & minimum noise levels at day time were recorded in the range of 48.5 dB(A) in Core area and 31.3dB(A) in MC Palli, Pedattalapalli Village in Minimum noise levels. 39.4 dB (A) billanakuppam Village and 29.5 dB (A) Peddanapalli Village, MC Palli Village respectively in night time noise levels. Thus, the noise level for Industrial and Residential area meets the requirements of CPCB.

3.5 Biological Environment

3.5.1. Study area Ecology

In this project, the total area of the Cluster with in 10km radius from the periphery of this quarry is reported as **12.74.9 Ha with 3 No. of quarries**. In such Cluster situation, a common Ecology and Biodiversity study for the entire cluster of quarries is enough to capture all the possible externalities. The common EIA/EMP data can be used for all quarries fall under this cluster but the present work was carried out on detailed study of the impacts Kothapetta Village Rough stone quarry on the ecology and biodiversity of the core lease area with the proper mitigation and sustainable management plan. The proposed mine lease area is slightly elevated topography. The following methods were applied during the baseline study of flora, fauna and diversity assessment.

3.5.2. Objectives of Biological Studies

- a) Undertake an intensive field survey to assess the status of floral & faunal component in different habitats in the core and buffer areas of the project site.
- b) Identification and listing of flora and fauna which are important as per the Wildlife (Protection) Act 1972.
- c) Suggest Wildlife conservation (species specific/habitat specific) and management plan for the threatened (critically endangered & endangered species - schedule I) faunal species if any reported within the study area.
- d) To identify the impacts of mining on agricultural lands and how it affects.
- e) Proper collection of information about wildlife Sanctuaries/ national parks/ biosphere reserves of the project area.
- f) Devise management & conservation measures for biodiversity.

3.5.2.1. Field surveys

The field visit was carried out to understand and assess the impacts of mining activities on flora & fauna and natural habitats and prediction after the enhancement of the production capacity of the mine. We evaluated the distribution and abundance of flora and fauna in the study area through primary and secondary data sources.

3.5.2.2. Floral Study

- The floral survey of the project area is based on field survey of the area.
- The local flora was identified by their morphological observation, such as the size, age and shape of the leaf, flowers, fruits, and their bark features of the stem, and also documented their habitat viz. Trees, Shrubs, Herbs, Grasses, Climbers etc.
- After surveying the core and the buffer areas, a detailed floral inventory has been compiled. A list of all plants from the study area was prepared and their habitats were recorded.
- Selection of sampling locations was made with reference to topography, land use, vegetation pattern, wind pattern, etc. The observations were taken on natural vegetation, roadside plantations, and non-forest areas (agricultural fields, in plain areas, village wasteland, etc.) for quantitative representation of different species.

3.5.3. Methodology of Sampling

Identification of vegetation in relation to the natural flora and crops was conducted through reconnaissance field surveys and onsite observations in core and buffer zone. The plant species identification was done based on the reference materials and also by examining the morphological characteristics and reproductive materials i.e. flowers, fruits and seeds. Land use pattern in relation to agriculture crop varieties were identified through physical verification of land and interaction with local villagers.

The faunal elements (animal species) of core and buffer zone were identified by direct sightings or indirect evidences viz. pug marks, skeletal remains, scats and droppings etc. (Jayson and Easa 2004). Standard binocular was used for the observations. The authenticity of faunal elements occurrence was confirmed by interaction with the local people. Avifauna identification was done with pictorial descriptions of published literature. Information pertaining to existence of any migratory corridors and paths were obtained from local inhabitants. The status of each faunal element was determined and the Wildlife schedule category was ascertained as per the IUCN-Red Data Book and Indian wildlife (Protection) Act, 1972.

Plot method is used in the floral documentation in the core and buffer zone. For trees (10x10-m), shrubs (5x5-m) and herbs (1x1-m) plots were taken. Birds and butterflies were mainly focused during faunal assessment, transect method was employed for birds and butterflies. Transect is a path along which one counts and records the occurrence of an individual for study. A straight-line walk covering desired distance, within a time span of one hour to 30 minutes was carried out in the proposed region. Bird species were recorded during the hours of peak activity. 0700 to 1100 Hrs and 1430 to 1730 Hrs (Bibby et al. 2000).

Direct observations and bird calls were used for bird documentation. Same transects were used for counting butterflies. Opportunistic observations were made for Amphibians, reptiles and ordinates. Presence of mammals was recorded by direct and indirect signs. All possible transects were taken for birds and butterflies. Birds and butterflies were classified into species level. Recorded bird species were identified to species level using standard books (Ali & Ripley 1987, Grimmett et al., 2016).

3.5.3.1. Sampling

A stratified simple random sampling procedure was employed to obtain a sample from study area. The study area was further stratified in different land use/ecosystems.

3.5.3.2. Sampling Size

Keeping in mind both random sampling technique and covering all land use patterns for the study following sampling locations were chosen depending up on the area of the proposed site.

3.5.3.3. Timing of Study

The study was carried out during morning and evening hours, to cover the different activity phases for important species such as time resting, feeding, hunting, and daily movements.

3.5.3.4. Observations from Sampling

The various observations relating to flora and fauna species are discussed in detail below, in separate sections.

3.5.3.5. Equipment/ References

- Canon Mark III Camera with 50-500mm lens– Snap shots taken
- Leica Binoculars (8x 20) to spot/identify species
- IUCN Red Data Book – <https://www.iucnredlist.org/species>

Ornithological/Entomological/Herpetological/Mammalian catalogues and pictorial descriptions from various authors and websites are followed for species identification.

3.5.4. Part I Field Sampling Techniques

3.5.4.1. Transect walk – Birds

Six no transect lines with varying length (100m-300m) and fixed width (2m) were laid which cuts through the core and buffer areas of proposed site. The transect surveys were conducted from 0700 to 1100Hrs and 1430 to 1730Hrs (Bibby et al. 2000). All avifauna found along these transects were recorded for analysing the data. Counts were conducted while there is no heavy rain, mist or strong wind.

3.5.4.2. Modified Pollard Walk – for Butterflies

The Modified Pollard Walk (Pollard 1977, 1993, Walpole 1999) using fixed width transect walk method were employed to investigate butterfly spatial distribution, diversity and abundance at the different survey sites.

3.5.4.3. Visual Encounter Survey (VES) - reptiles and Amphibians

VES is a time-constrained sampling technique (Campbell and Christman, 1982; Corn and Bury, 1990). It needs a systematic search through an area or habitat for a prescribed time period (Campbell and Christman, 1982). The result of VES is measured against the time spent on search. VES technique is one of the simplest methods, and an appropriate technique for both inventory and monitoring Herpetofauna (Heyer et al. 1994).

3.5.4.4. Observational methods- Mammals

For the purpose of recording mammals, we used two different observational techniques: (1) direct observations, and (2) recording of occurrences like holes, markings, scats, hairs, and spines (Menon 2003). For identification confirmations, photographs with a scale reference were used, and locations were recorded using a portable GPS device. Indigenous knowledge particularly that of the locals, was occasionally employed to compile a preliminary list of species and/or aid in the recognition of indicators.

3.5.4.5. Multiple Stage Quadrat – Vegetation

A variety of habitat or vegetation structure variables were measured using the Multiple Stage Quadrat sampling protocol (Sykes and Horrill 1977). All of those areas were sampled, and the major corners were temporarily delineated with colored ribbons. Each site was identified in the field using a compass and clinometer, and the plot's latitude, longitude, and elevation were recorded using a handheld Global Positioning System (Garmin 12XL).

3.5.5. Flora

The quadrat sampling technique was used for sampling vegetation. Sampling quadrats of the regular shape of dimensions 10 × 10 m, 5 × 5 m, and 1 × 1 m, were nested within each other and were defined as the units for sampling the area and measuring the diversity of trees, Shrubs, and herbs respectively.

3.5.5.1. Flora Composition in the Core Zone

Taxonomically a total of 26 species belonging to 15 families have been recorded from the core zone mining lease area. The area is slightly elevated topography. Based on the habitat classification of the enumerated plants the majority of species were Herbs 10, followed by Shrubs 6, Trees 5, and Grass 3 and Climber/ Creepers 2. Details of flora with the scientific name were mentioned in Table No. 3.53. The result of the core zone of flora studies shows that Fabaceae and Poaceae, Lamiaceae are the main dominating species in the study area mentioned in Table No.3.26. No species were found as threatened category.

Table No: 3.26. Flora in the Core zone of Kothapetta Village, Rough stone quarry

Sl. No	English Name	Vernacular Name	Scientific Name	Family Name
Trees				
1.	Mesquite	Mullu maram	<i>Prosopis juliflora</i>	Fabaceae
2.	Pala indigo	Pala maram	<i>Wrightia tinctoria</i>	Apocynaceae
3.	White Bark Acacia	Vela maram	<i>Vachellia leucophloea</i>	Fabaceae
4.	Gum arabic tree	Karuvelam	<i>Acacia nilotica</i>	Fabaceae
5.	Neem	Vembu	<i>Azadirachta indica</i>	Meliaceae
Shrubs				
1.	Lantana	Unni chedi	<i>Lantana camara</i>	Verbenaceae
2.	Giant Aloe vera	Kattu katrazhai	<i>Aloe vera</i>	Asphodelaceae
3.	Indian fig opuntia	Sapathikalli	<i>Opuntia ficus-indica</i>	Cactaceae
4.	Milk Weed	Erukku	<i>Calotropis gigantea</i>	Apocynaceae
5.	Coromandel Boxwood	Karai	<i>Canthium coromandelicum</i>	Rubiaceae
6.	Triangular spruge	Chaturakalli	<i>Euphorbia antiquorum</i>	Euphorbiaceae
Herbs				
1.	Common leucas	Thumbai	<i>Leucas aspera</i>	Lamiaceae
2.	Carrot grass	Partiniyam	<i>Parthenium hysterophorus</i>	Asteraceae
3.	Christmas Bush	Poom pul	<i>Chromolaena odorata</i>	Asteraceae
4.	Fish poison	Kolinchi	<i>Tephrosia purpurea</i>	Fabaceae
5.	Flannel Weed	Sida mutti	<i>Sida cordifolia</i>	Malvaceae
6.	Pignut	Nattapoochedi	<i>Hyptis suaveolens</i>	Lamiaceae
7.	Coat buttons	Thatha poo	<i>Tridax procumbens</i>	Asteraceae
8.	Bindii	Nerunji mullu	<i>Tribulus terrestris</i>	Zygophyllaceae
9.	Holy basil	Thulasi	<i>Ocimum tenuiflorum</i>	Lamiaceae
10.	Prickly chaff flower	Nayuruvi	<i>Achyranthes aspera</i>	Amaranthaceae
Grass				
1.	Eragrostis	Pullu	<i>Eragrostis ferruginea</i>	Poaceae
2.	Great brome	Thodappam	<i>Bromus diandrus</i>	Poaceae
3.	Nut grass	Korai	<i>Cyperus rotandus</i>	Poaceae
Climber/ Creepers				
1.	Stemmed vine	Perandai	<i>Cissus quadrangularis</i>	Vitaceae
2.	Stinking passionflower	Poonai puduku chedi	<i>Passiflora foetida</i>	Passifloraceae

(Sources: Species observation in the field study)

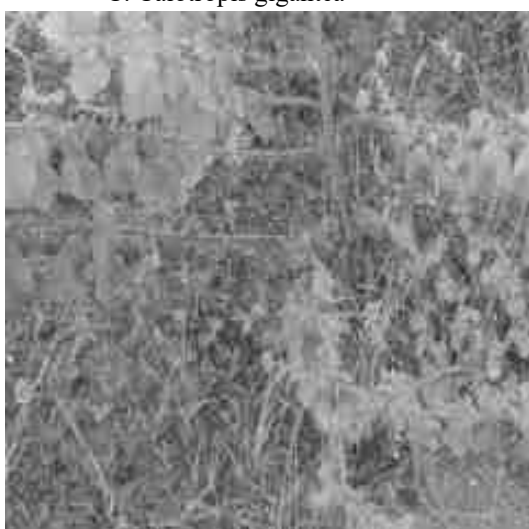
A. *Prosopis juliflora*B. *Lantana camara*



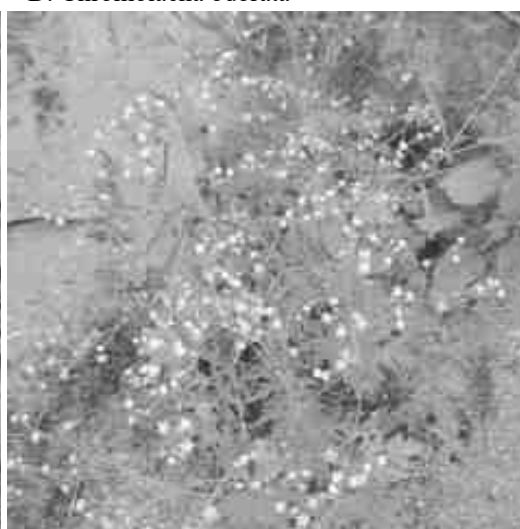
C. *Calotropis gigantea*



D. *Chromolaena odorata*



E. *Hyptis suaveolens*



F. *Parthenium hysterophorus*



G. *Euphorbia antiquorum*



H. *Azadirachta indica*



I. *Wrightia tinctoria*

J. *Cissus quadrangularis*

Fig No: 3.26. Flora species observation in the Core zone area

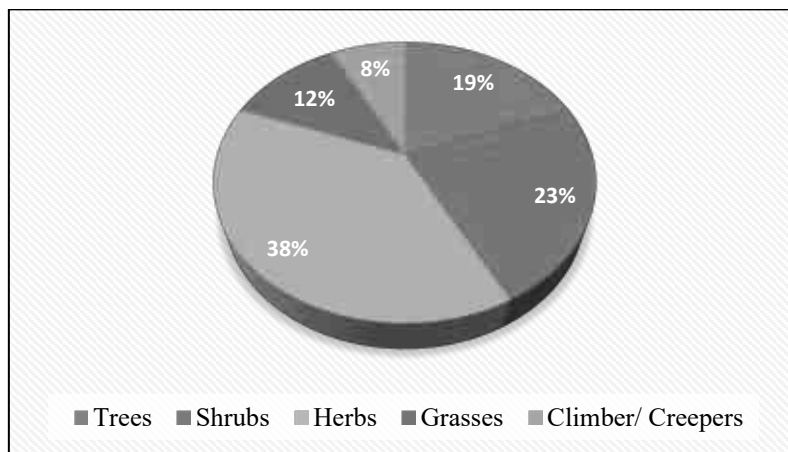


Fig No: 3.27. Graph Showing % Distribution Of Floral Life Forms (Core Zone)

Table No: 3.27. Flora in Buffer Zone of Kothapetta Village, Rough stone quarry, Krishnagiri District, Tamil Nadu.

S.No.	English Name	Vernacular Name	Scientific Name	Family Name
Trees				
1.	Millettia pinnata	Pongam oiltree	<i>Pongamia pinnata</i>	Fabaceae
2.	Mesquite	Mullu maram	<i>Prosopis juliflora</i>	Fabaceae
3.	Bitter Albizia	Arappu Tree	<i>Albizia amara</i>	Fabaceae
4.	Peepal	Arasanmaram	<i>Ficus religiosa</i>	Moraceae
5.	Pala indigo	Pala maram	<i>Wrightia tinctoria</i>	Apocynaceae
6.	Indian ash tree	Odiya maram	<i>Lannea coromandelica</i>	Anacardiaceae
7.	Neem	Vembu	<i>Azadirachta indica</i>	Meliaceae
8.	Tamarind	Puliyamaram	<i>Tamarindus indica</i>	Legumes
9.	Indian Jujube	Ilanthai	<i>Ziziphus jujuba</i>	Rhamnaceae
10.	Wild Date Palm	Icham	<i>Phoenix sylvestris</i>	Arecaceae
11.	Coral Tree	Kalyana murungai	<i>Erythrina variegata</i>	Papilionoide
12.	Malayan Cherry	Ten Pazham	<i>Muntingia calabura</i>	Muntingiaceae
13.	Asian Palmyra palm	Panai maram	<i>Borassus flabellifer</i>	Arecaceae
14.	White Bark Acacia	Vela maram	<i>Vachellia leucophloea</i>	Fabaceae
15.	Indian almond	Padam maram	<i>Terminalia catappa</i>	Combretaceae
16.	Banana tree	Vazhaimaram	<i>Musa acuminata</i>	Musaceae
17.	Indian ash tree	Odiya maram	<i>Lannea coromandelica</i>	Anacardiaceae
18.	Curry leaves	Karuveppali	<i>Murraya koenigii</i>	Rutaceae
19.	Lemon	Ezhumuchaipalam	<i>Citrus lemon</i>	Rutaceae
20.	Bidi leaf tree	Thiruvathi Plant	<i>Bauhinia racemosa</i>	Fabaceae
21.	Rusty Acacia	Parambai	<i>Acacia ferruginea</i>	Mimosaceae
22.	Mango	Manga	<i>Mangifera indica</i>	Anacardiaceae
23.	Teak	Thekku	<i>Tectona grandis</i>	Verbenaceae
24.	Yellow flame tree	Perunkondrai	<i>Peltophorum pterocarpum</i>	Fabaceae
25.	Custard apple	Seethapazham	<i>Annona reticulata</i>	Annonaceae
26.	Flamboyant	Cemmayir-konrai	<i>Delonix regia</i>	Fabaceae
27.	Chinaberry	Malai vembu	<i>Melia azedarach</i>	Meliaceae
28.	Monkey pod tree	Thungumoonchi	<i>Samanea saman</i>	Fabaceae
29.	Yellow Flame	Iyalvagai	<i>Peltophorumpterocarpum</i>	Fabaceae
30.	Indian gooseberry	Nelli	<i>Emblica officinalis</i>	Phyllanthaceae
31.	Black Siris	Karuvagai	<i>Albizia odoratissima</i>	Mimosaceae
32.	Madras thorn	Kudukapuli	<i>Pithecellobium dulce</i>	Fabaceae
33.	Blue gum	Thayala maram	<i>Eucalyptus</i>	Myrtaceae

34.	Banyan tree	Alamaram	<i>Ficus benghalensis</i>	Moraceae
35.	Chinese chaste tree	Nochi	<i>Vitex negundo</i>	Verbenaceae
36.	Ceylon satinwood	Porasu	<i>Chloroxylon swietenia</i>	Rutaceae
37.	Bamboo	Moonghil	<i>Bambusa bambo</i>	Poaceae
38.	Sacred Tree	Porasu	<i>Butea monosperma</i>	Fabaceae
39.	Notched Leaf Soapnut	Poovankottai	<i>Sapindus emarginata</i>	Sapindaceae
40.	Coconut	Thennai maram	<i>Cocos nucifera</i>	Arecaceae
41.	Guava	Koyya	<i>Psidium guajava</i>	Myrtaceae
42.	River tamarind	Savundal maram	<i>Leucaena leucocephala</i>	Fabaceae
43.	Portia tree	Poovarasam	<i>Thespesia populnea</i>	Malvaceae
44.	Drumstick tree	Murunga maram	<i>Moringa oleifera</i>	Moringaceae
45.	Jamun Fruit Plant	Naval maram	<i>Syzygium cumini</i>	Myrtaceae
46.	Papaya	Pappali maram	<i>Carica papaya</i>	Caricaceae
47.	Jackfruit	Palamaram	<i>Artocarpus heterophyllus</i>	Moraceae
Shrubs				
1.	Puriging nut	Kattamanakku	<i>Jatropha curcas</i>	Euphorbiaceae
2.	Milk Weed	Erukku	<i>Calotropis gigantea</i>	Apocynaceae
3.	Lantana	Unni chedi	<i>Lantana camara</i>	Verbenaceae
4.	Triangular spruge	Chaturakalli	<i>Euphorbia antiqorum</i>	Euphorbiaceae
5.	Indian mallow	Thuthi	<i>Abutilon indicum</i>	Meliaceae
6.	Broom creeper	Kattukodi	<i>Cocculus hirsutus</i>	Menispermaceae
7.	Solanum pubescens	Malaisundai	<i>Solanum pubescens Wild</i>	Solanaceae
8.	Indian Oleander	Arali	<i>Nerium indicum</i>	Apocynaceae
9.	Tanner's cassia	Avaram	<i>Senna auriculata</i>	Fabaceae
10.	Shoe flower	Chemparuthi	<i>Hibiscu rosa-sinensis</i>	Malvaceae
11.	Prickly pear	Nagathali	<i>Opuntia dillenii</i>	Cactaceae
12.	Hopbush	Virali	<i>Dodonaea viscosa</i>	Sapindaceae
13.	Paper flower	Kahitha poo	<i>Bougainvillea glabra</i>	Nyctaginaceae
14.	Datura metel	Uumaththai	<i>Datura metel</i>	Solanaceae
15.	Jackal jujube	Suraimullu	<i>Ziziphus oenoplia</i>	Rhamnaceae
16.	Carray Cheddle	Kaarai	<i>Canthiumparviflorum</i>	Rubiaceae
17.	Indian fig opuntia	Sapathikalli	<i>Opuntia ficus-indica</i>	Cactaceae
18.	Chinese chastetree	Nalla nochi	<i>Vitex negundo</i>	Verbinaceae
19.	Night shade plan	Sundaika	<i>Solanum torvum</i>	Solanaceae
20.	Thorn apple	Oomathai	<i>Datura stramonium</i>	Solanaceae
21.	Malabar catmint	Pei veratti	<i>Anisomeles malabarica</i>	Lamiaceae
22.	Castor oil plant	Amanakku	<i>Ricinus communis</i>	Euphorbiaceae
23.	Bush Morning Glory	Neiveli Kattamani	<i>Ipomoea carnea</i>	Convolvulaceae
24.	Castor bean	Amanakku	<i>Ricinus communis</i>	Euphorbiaceae
25.	Touch-me-not	Thottalchinungi	<i>Mimosa pudica</i>	Mimosaceae

26.	Flame of the Woods	Idlipoo	<i>Xoracoc cineia</i>	Rubiaceae
Herbs				
1.	Coat buttons	Thatha poo	<i>Tridax procumbens</i>	Asteraceae
2.	Eggplant	Kathrikkai	<i>Solanum melongena</i>	Solanaceae
3.	Christsmas Bush	Poom pul	<i>Chromolaena odorata</i>	Asteraceae
4.	Aloe barbadensis	Katrazhai	<i>Aloe vera</i>	Asphodelaceae
5.	Mountain knotgrass	Thengaipoo kirai	<i>Aerva lanata</i>	Amaranthaceae
6.	Prickly chaff flower	Nayuruv	<i>Achyranthes aspera</i>	Amaranthaceae
7.	Bindii	Nerunchi	<i>Tribulus terrestris</i>	Zygophyllaceae
8.	Fish poison	Kolinchi	<i>Tephrosia purpurea</i>	Fabaceae
9.	Ban Tulsi	Melakai poondu	<i>Croton bonplandianus</i>	Euphorbiaceae
10.	Commelina benghalensis	Kanavazha	<i>Commelina benghalensis</i>	Commelinaceae
11.	Asthma-plant	Amman pacharisi	<i>Euphorbia hirta</i>	Euphorbiaceae
12.	Indian doab	Arugampul	<i>Cynodon dactylon</i>	Poaceae
13.	Spiny amaranth	Mullu keerai	<i>Amaranthus spinosus</i>	Amaranthaceae
14.	Chilli	Milakai	<i>Capsicum annum</i>	Solanaceae
15.	Arrowleaf sida	Jelly Leaf	<i>Sida rhombifolia</i>	Malvaceae
16.	Cracker plant	Tapas kaaya	<i>Ruellia tuberosa</i>	Acanthaceae
17.	Flannel Weed	Sida mutti	<i>Sida cordifolia</i>	Malvaceae
18.	Indian Copperleaf	Kuppaimeni	<i>Acalypha indica</i>	Euphorbiaceae
19.	Madagascar Periwinkle	Nithykalyani Podi	<i>Catharanthus roseus</i>	Apocynaceae
20.	Marsh barbel	Neermulli	<i>Hygrophila auriculata</i>	Acanthaceae
21.	Yellow-fruit nightshade	Kandakathirika	<i>Solanum surattense</i>	Solanales
22.	Asian spiderflower	Naaikaduku	<i>Cleome viscosa L</i>	Cleomaceae
23.	Chay root	Chaaya ver	<i>Oldenlandia umbellata</i>	Rubiaceae
24.	Ash Fleabane	Puvangkuruntal	<i>Vernonia cinerea</i>	Asteraceae
25.	Tomato	Thakkali	<i>Solanum lycopersicum</i>	Solanaceae
26.	White dammar	Mookutipoondu	<i>Vicoa indica</i>	Asteraceae
27.	Cleome viscosa	Nai kadugu	<i>Celome viscosa</i>	Capparidaceae
28.	Bindii	Nerunji mullu	<i>Tribulus terrestris</i>	Zygophyllaceae
29.	Bara Gokhru	Yanainerunjil	<i>Pedaliium murex</i>	Pedaliaceae
30.	Digeria muricata	Thoiya keerai	<i>Digeria muricata</i>	Amaranthaceae
31.	False daisy	Karisalankanni	<i>Eclipta alba</i>	Asteraceae
32.	Sessile Joyweed	Ponnakanni	<i>Alternanthera sessilis</i>	Amaranthaceae
33.	Pignut	Nattapoochedi	<i>Hyptis suaveolens</i>	Lamiaceae
34.	Field beans	Avarai	<i>Hyacinth Beans</i>	Fabaceae
35.	Common leucas	Thumbai	<i>Leucas aspera</i>	Lamiaceae
36.	Holy basil	Thulasi	<i>Ocimum tenuiflorum</i>	Lamiaceae
37.	Malabar catmint	Pei veratti	<i>Anisomeles malabarica</i>	Lamiaceae
38.	Coat buttons	Thatha poo	<i>Tridax procumbens</i>	Asteraceae

39.	Indian mint	Karpura valli	<i>Coleus amboinicus</i>	Lamiaceae
40.	Aloe barbadensis	Katrazhai	<i>Aloe vera</i>	Asphodelaceae
41.	Europeanblack nightshade	Manathakkali	<i>Solanumnigrum</i>	Solanaceae
42.	Bright eyes	Nithiyakalyani	<i>Catharanthus roseus</i>	Apocynaceae
43.	Carrot grass	Partiniyam	<i>Parthenium hysterophorus</i>	Asteraceae
44.	Red Spiderling	Mukirattai	<i>Boerhavia diffusa</i>	Nyctaginaceae
Climbers/ Creepers				
1.	Stemmed vine	Perandai	<i>Cissus quadrangularis</i>	Vitaceae
2.	Wild bitter	Pavarkai	<i>Momordica charantia</i>	Cucurbitaceae
3.	Ivy gourd	Kovai	<i>Coccinia grandis</i>	Cucurbitaceae
4.	Balloon plant	Mudakrttan	<i>Cardiospermum halicacabum</i>	Sapindaceae
5.	Cucumis maderaspatanus	Musumusukkai	<i>Mukia maderaspatana</i>	Cucurbitaceae
6.	Butterfly pea	Sangu poo	<i>Clitoria ternatea</i>	Fabaceae
7.	Wild jasmine	Malli	<i>Jasminum augustifolium</i>	Oleaceae
8.	Pointed gourd	Kovakkai	<i>Trichosanthes dioica</i>	Cucurbitaceae
9.	Bitter apple	Peikkumatti	<i>Citrullus colocynthis</i>	Cucurbitaceae
10.	Bottle Guard	Sorakkai	<i>Lagenaria siceraria</i>	Cucurbitaceae
11.	Rosary Pea	Gundumani	<i>Abrus precatorius</i>	Fabaceae
Grasses				
1.	Windmill grass	Chevvarakupul	<i>Chloris barbata</i>	Poaceae
2.	Jungle rice	Kuthirai vaalKattu arusi	<i>Echinochloa colona</i>	Poaceae
3.	Swollen Windmill Grass	Kondai Pul	<i>Chloris barbata</i>	Poaceae
4.	Needle Grass	Thodappam	<i>Aristida adscensionis</i>	Poaceae
5.	Eragrostis	Pullu	<i>Eragrostis ferruginea</i>	Poaceae
6.	Needle Grass	-	<i>Aristida funiculata</i>	Poaceae
7.	Mauritian Grass	Moongil pul	<i>Apluda mutica</i>	Amaranthaceae

*E- Economical, M- Medicinal, EM- Both Economical and Medicinal, NE- Not evaluated.

(Sources: Species observation in the field study)

3.5.5.2. Economically important Flora of the study area

The major irrigated crops in the district are paddy, ragi, turmeric, sugarcane, banana, tomato, groundnut, cotton, coconut and flowers. The irrigated area under vegetables, fruit and flowers. Farmers have adopted to cultivation methods through judicious use of water with modern water management techniques and technology.

3.5.5.3. Major Crops in the District

Owing to the climate and soil conditions Krishnagiri District suits to diverse type of cultivation. There are about 26 type of crops grown in the District including medicinal plants. Important crops grown in the District are Paddy, Ragi, Chulam, Red gram, Black gram, Horse Gram, Mango, Coconut, Cabbage, Banana, Tomato, Califlower etc., and the major cash crops are groundnut, flowers and cotton.

Source: DDS – Krishnagiri, 2019

3.6. Flora Composition in the Buffer Zone

Similar habitats may be found in the buffer area as well, although there is a wider variety of plants there than in the core zone area. The buffer zone has some forests located away from the proposed project site and there are 135 species in the buffer zone study area in total, based on records. The floral (135) varieties among them Trees 48, Herbs 44, Shrubs 26, Climbers/Creepers 11, and Grasses 7 were identified. The result of the buffer zone of flora studies shows that Fabaceae and Cucurbitaceous, Euphorbiaceae is the main dominating species in the study area mentioned in Table No.3.28. There are no impacts due to this mining activity. There are no Rare, Endangered, and Threatened Flora species in the mining area and their surrounding study area. Apart from the proposed project area, there is agricultural land. Horticulture and agricultural land are untouched. There are no Rare, Endangered, and Threatened Flora species in the mining area and their surrounding study area. A list of floral species has been prepared based on primary survey (site observations) and discussion with local people. The total number of different plant life forms under trees, shrubs, herbs, and climbers is shown in Table 3.28 and their % distribution is shown in Figure 3.28.

Table 3.28: Number of floral life forms in the Study Area

S. No	Plant Life Form	Number of Species
1	Trees	47
2	Shrubs	26
3	Herbs	44
4	Climber	11
6	Grasses	7
Total No. of Species		135

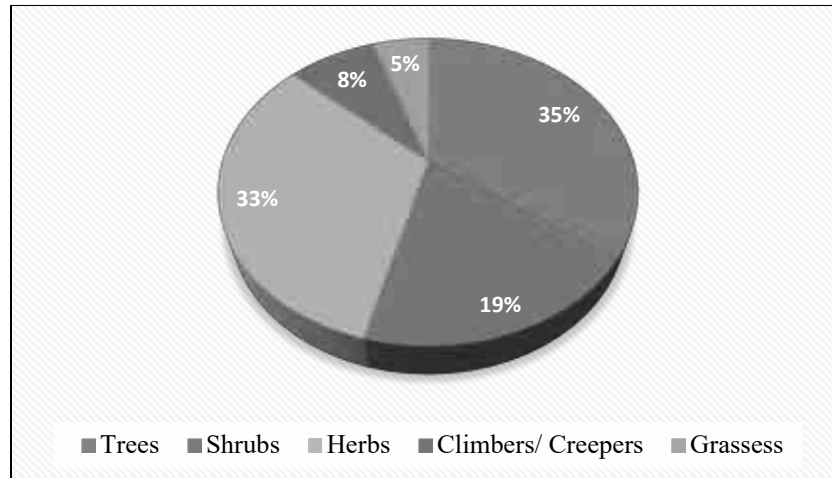


Fig No. 3.28: Graph Showing % Distribution of Floral Life Forms (Buffer Zone)

3.5.7. The vegetation in the RF / PF areas, ecologically sensitive areas etc.

There are no National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar sites, Tiger/Elephant Reserves/(existing as well as proposed) within 10 km of the mine lease area. There is no Reserve Forest situated within in 1 km radius. There is no Reserve Forest situated within in 1 km radius. The nearest Reserve Forest is Peddathalapalli R.F-2.30km-SW. There are no protected forests within the project area. In addition, No Biosphere Reserves, Wildlife corridors, or, Tiger/ Elephant reserves within 10 km of the project area. No protected (PF) forests either in the mine lease area or in the buffer zone. Thus, no forest land is involved in any manner.

There are no protected or ecologically sensitive areas such as National parks or Important Bird Areas (IBAs), or Wetlands or migratory routes of fauna or water bodies or human settlements within the proposed mine lease area. There are no Biosphere reserves or wildlife sanctuaries or National parks or Important Bird Areas (IBAs), or migratory routes of fauna. Thus, the area under study (Mine lease area and the 10 Km buffer zone) is not ecologically sensitive.

Thus, no forest land is involved in any manner. There are no impacts due to this mining activity. There are neither forests nor forest dwellers nor forest-dependent communities in the mine lease area. There shall be no forest-impacted families (PF) or people (PP). Thus, the rights of Traditional Forest Dwellers will not be compromised on account of the project.

3.6. Fauna

The faunal survey has been carried out as per the methodology cited and listed out Mammals, birds, Reptiles, Amphibians, and Butterflies. All the listed species were compared with Red Data Book and Indian Wildlife Protection Act, 1972. There are no rare, endangered, threatened (RET) and endemic species present in the core area.

3.6.1. Fauna Composition in the Core Zone

A total of 24 varieties of species were observed in the Core zone of Kothapetta Village, Black Granite quarry (Table No.3.29) among them numbers of Insects/ Butterflies 7, Reptiles 5, Mammals 3, and Avian 9. A total of 24 species have been recorded from the core mining lease area. None of these species are threatened or endemic in the study area and surroundings. There is no Schedule I species and 17 species are under Schedule IV according to the Indian Wildlife Act 1972. A total of 9 species of bird were sighted in the mining lease area. There are no critically

endangered, endangered, vulnerable, and endemic species were observed. Details of fauna in the core zone with the scientific name were mentioned in Table No. 3.56.

Table No: 3.29. Fauna in the Core zone of Kothapetta Village, Rough stone quarry Krishnagiri District, Tamil Nadu

SI. No	Common name	Family Name	Scientific Name	Schedule list WPA 1972
Insects/Butterflies				
1.	Common Tiger	Nymphalidae	<i>Danaus genutia</i>	Schedule IV
2.	Red-veined darter	Libellulidae	<i>Sympetrum fonscolombii</i>	NL
3.	Grey pansy	Nymphalidae	<i>Junonia atlites</i>	Schedule IV
4.	Danaid egg fly	Nymphalidae	<i>Hypolimnasmisippus</i>	Schedule IV
5.	Grasshopper	Acrididae	<i>Hieroglyphus sp</i>	NL
6.	Common Tiger	Nymphalidae	<i>Danaus genutia</i>	NL
7.	Striped tiger	Nymphalidae	<i>Danaus plexippus</i>	Schedule IV
Reptiles				
1.	Garden lizard	Agamidae	<i>Calotes versicolor</i>	NL
2.	Common skink	Scincidae	<i>Mabuya carinatus</i>	NL
3.	Rat snake	Colubridae	<i>Ptyas mucosa</i>	Sch II (Part II)
4.	Common krait	Elapidae	<i>Bungarus caeruleus</i>	Schedule IV
5.	Green vine snake	Colubridae	<i>Ahaetulla nasuta</i>	Schedule IV
Mammals				
1.	Indian Field Mouse	Muridae	<i>Mus booduga</i>	Schedule IV
2.	Asian Small Mongoose	Herpestidae	<i>Herpestidae</i>	Schedule (Part II)
3.	Common rat	Muridae	<i>Rattus rattus</i>	Schedule IV
Aves				
1.	Koel	Cuculidae	<i>Eudynamys</i>	Schedule IV
2.	Common myna	Sturnidae	<i>Acridotheres tristis</i>	Schedule IV
3.	Black drongo	Dicruridae	<i>Dicrurus macrocercus</i>	Schedule IV
4.	Shikra	Laniidae	<i>Laniusexcubitor</i>	Schedule IV
5.	Rose-ringed parakeet	Psittaculidae	<i>Psittacula krameri</i>	Schedule IV
6.	Asian green bee-eater	Meropidae	<i>Meropsorientalis</i>	Schedule IV
7.	Common quail	Phasianidae	<i>Coturnix coturnix</i>	Schedule IV
8.	House crow	Corvidae	<i>Corvus splendens</i>	Schedule V
9.	Cattle egret	Ardeidae	<i>Bubulcus ibis</i>	Schedule IV

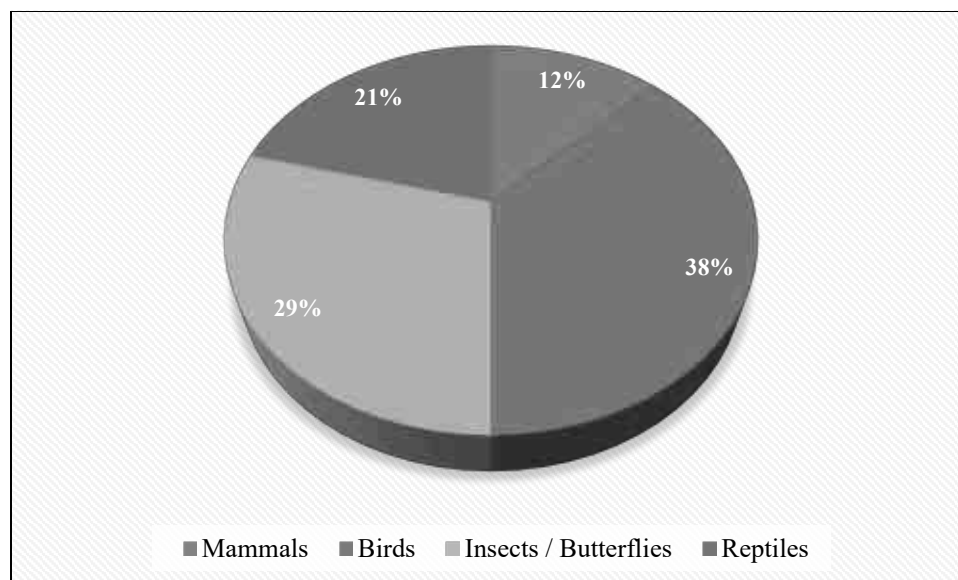


Fig No. 3.29: Pie chart Showing distribution of Fauna Life Forms (Core Zone)

3.6.2. Fauna Composition in the Buffer Zone

As animals, especially vertebrates move from place to place in search of food, shelter, mate or other biological needs, separate lists for core and buffer areas are not feasible however, a separate list of fauna pertaining to core and buffer zone are listed separately. Though there is no reserved forests in the buffer zone. As such there are no chances of occurrence of any rare or endangered or endemic or threatened (REET) species within the core or buffer area.

There are no Sanctuaries, National Parks, Tiger Reserve or Biosphere reserves or Elephant Corridor or other protected areas within 10 km radius of from the core area. It is evident from the available records, reports, and circumstantial evidence that the entire study area including the core and buffer areas were free from any endangered animals. There were no resident birds other than common bird species such as Red-whiskered Bulbul, Asian Koel, House crow, Black drangos, Crows, Pond heron etc.

The list of Mammals (*directly sighted animals & Secondary data) is given in table No.3.30. The list of bird species recorded during the field survey and literature from the study area are given in Table 3.31. The list of reptilian species recorded during the field survey and literature from the study area is given in Table 3.32. The list of insect species recorded during the field survey and literature from the study area are given in Table 3.33. The list of Butterflies species recorded during the field survey and literature from the study area are given in Table 3.34. It is apparent from the list that none of the species either spotted or reported is included in Schedule I of the Wildlife Protection Act. Similarly, none of them comes under the REET category.

Taxonomically a total of 79 species recorded were from the buffer zone area. Based on habitat classification the majority of species were birds 36, followed by Butterflies 15, Reptiles 10, Insects 5, Mammals 9, and Amphibians 4. There are five Schedule II species, two species are under the schedule III and fortyseven species are under Schedule IV according to the Indian Wildlife Act 1972. A total of 36 species of bird were sighted in the study area. There are no critically endangered, endangered, vulnerable, and endemic species were observed. There are no impacts on nearby fauna species.

Dominant species are mostly birds, butterflies, and insects, and four amphibian was observed during the extensive field visit *Sphaerotheca breviceps*, *Euphyctis hexadactylus*, *Bufo melanostictus*, etc. There is no Schedule I Species in the study area. There are no critically endangered, endangered, vulnerable, and endemic species were observed.

Table 3.30. List of Fauna & Their Conservation Status, Mammals: (*directly sighted animals & Secondary data)

SI. No	Scientific Name	Common Name/English Name	Schedule list WPA 1972
1.	<i>Herpestes edwardsi</i>	Indian Grey Mongoose	Schedule II
2.	<i>Mus booduga</i>	Little Indian field mouse	Schedule IV
3.	<i>Bandicota bengalensis</i>	Indian mole-rat	Schedule IV
4.	<i>Mus musculus</i>	House mouse	Schedule IV
5.	<i>Funambulus palmarum</i>	Common Palm Squirrel	Schedule IV
6.	<i>Rattus rattus</i>	Black rat	Schedule IV
7.	<i>Bandicota indica</i>	Rat	Schedule IV
8.	<i>Lepus nigricollis</i>	Indian Hare	Schedule IV
9.	<i>Cynopterus sphinx</i>	Short nosed fruit bat	Schedule IV

Table 3.31. Listed birds

SI. No	Scientific Name	Common Name	Schedule list WPA 1972
1.	<i>Dicrurus adsimilis</i>	Fork-tailed drongo	Schedule IV
2.	<i>Alcedo atthis</i>	Common Kingfisher	Schedule IV
3.	<i>Copsychus fulicatus</i>	Indian robin	Schedule IV
4.	<i>Dicrurus paradiseus</i>	Racket tailed drongo	Schedule IV
5.	<i>Corvus splendens</i>	House crow	Schedule V
6.	<i>Dicrurus macrocercus</i>	Black Drongo	Schedule IV
7.	<i>Halcyon smyrnensis</i>	White-breasted kingfisher	Schedule IV
8.	<i>Bubulcus ibis</i>	Cattle Egret	Schedule IV
9.	<i>Pelargopsis capensis</i>	Storkbilled kingfisher	Schedule IV
10.	<i>Hypsipetes madagascariensis</i>	Black bulbul	Schedule IV
11.	<i>Columba livia</i>	Rock pigeon	Schedule IV
12.	<i>Turdoides caudatus</i>	Common Babbler	Schedule IV
13.	<i>Acridotheres tristis</i>	Common myna	Schedule IV
14.	<i>Psittacula krameri</i>	Rose ringed parakeet	Schedule IV
15.	<i>Coturnix coturnix</i>	Grey quail	Schedule IV
16.	<i>Passer domesticus</i>	House Sparrow	Schedule IV
17.	<i>Pycnonotus cafer</i>	Red vented Bulbul	Schedule IV
18.	<i>Accipiter badius</i>	Shikra	Schedule IV
19.	<i>Megalaima viridis</i>	Small green barbet	Schedule IV
20.	<i>Cuculus canorus</i>	Cuckoo	Schedule IV
21.	<i>Calidris minuta</i>	Little stint	Schedule IV
22.	<i>Merops orientalis</i>	Small green bee eater	Schedule IV
23.	<i>Nectarinia minima</i>	Small sunbird	Schedule IV
24.	<i>Ardeola grayii</i>	Pond Heron	Schedule IV

25.	<i>Spilopelia chinensis</i>	Spotted dove	Schedule IV
26.	<i>Milvus migrans</i>	Common Kite	Schedule IV
27.	<i>Phalacrocorax niger</i>	Little cormorant	Schedule IV
28.	<i>Egretta garzetta</i>	Little Egret	Schedule IV
29.	<i>Anthus hodgsoni</i>	Tree pipit	Schedule IV
30.	<i>Apus apus</i>	Common swift	Schedule IV
31.	<i>Ardea cinerea</i>	Grey heron	Schedule IV
32.	<i>Megalaima zeylanica</i>	Brown-headed barbet	Schedule IV
33.	<i>Eudynamys scolopacea</i>	Koel	Schedule IV
34.	<i>Coracias benghalensis</i>	Indian roller	Schedule IV
35.	<i>Turdoides striatus</i>	Jungle Babbler	Schedule IV
36.	<i>Tringa hypoleucos</i>	Common sandpiper	Schedule IV

Reference: Ali, S. (2002). The Book of Indian Birds (13th revised edition). Oxford University Press, New Delhi. 326pp.

Table 3.32. List of Reptiles either spotted or reported from the study area. (*indicates direct observations & Secondary data)

SI. No	Scientific Name	Common Name/English Name	Schedule list WPA 1972
1.	<i>Calotes versicolor</i>	Oriental garden lizard	NL
2.	<i>Hemidactylus flaviviridis</i>	House lizards	Schedule IV
3.	<i>Naja naja</i>	Indian cobra	Sch II (Part II)
4.	<i>Ahaetulla nasuta</i>	Green vine snake	Schedule IV
5.	<i>Ptyas mucosa</i>	Rat snake	Sch IV (Part II)
6.	<i>Bungarus caeruleus</i>	Common krait	Schedule IV
7.	<i>Mabuya carinatus</i>	Common skink	NL
8.	<i>Vipera russelli</i>	Russell's viper	Sch II (Part II)
9.	<i>Nerodia piscator</i>	Fresh water snake	Sch III (Part II)
10.	<i>Groemyda bijuga</i>	Fresh water tortoise	Sch III (Part II)

Table 3.33. List of insects either spotted or reported from the study area

SI. No	Scientific Name	Common Name	Schedule list WPA 1972
1.	<i>Apis cerana</i>	Indian honey bee	-
2.	<i>Hamitermes silvestri</i>	Termite	NE
3.	<i>Hieroglyphus sp</i>	Grasshopper	NL
4.	<i>Camponotus Vicinus</i>	Ant	NL
5.	<i>Ceratogomphus pictus</i>	Dragonfly	-

Table.3.34. List of Butterflies reported from the study area

SI. No	Scientific Name	Common Name	Schedule
1.	<i>Papilio clytia</i>	Common mime	-
2.	<i>Euploea core</i>	Euploea core	-
3.	<i>Pachliopta aristolochiae</i>	Common rose	-
4.	<i>Papilio polytes</i>	Common mormon	-
5.	<i>Spialia galba</i>	Indian Skipper	-
6.	<i>Danaus genutia</i>	Common tiger	-

7.	<i>Pachliopta hector</i>	Crimson rose	-
8.	<i>Eurema brigitta</i>	Eurema brigitta	-
9.	<i>Hypolimnas bolina</i>	Hypolimnas bolina	-
10.	<i>Castalius rosimon</i>	Common Pierrot	-
11.	<i>Curetis thetis</i>	Indian Sunbeam	-
12.	<i>Troides minos</i>	Southern birdwing	-
13.	<i>Papilio demoleus</i>	Lime Butterfly	-
14.	<i>Ariadne merione</i>	Common Castor	-
15.	<i>Neptis hylas</i>	Neptis hylas	-

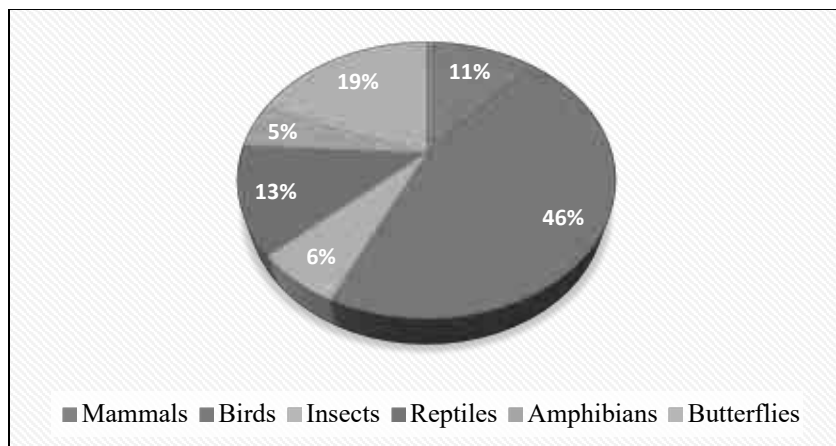


Fig No. 3.30: Pie Chart Showing distribution Of Fauna Life Forms (Buffer Zone)

Livestock like cattle, buffalo, goat, poultry, duck and pig are reared for dairy products, meat, and egg and for agriculture purpose. Majority of cattle and buffalo are of local variety. Backyard poultry farms are mostly common in this area; however, some commercial poultry farms are also recorded in the study area.

The study area is marked with moderate population of flora and fauna. With reference to the Wildlife Protection Act 1972 total number of wildlife tabulated in this study can be characterized as given in the Table 3.35.

Table No: 3.35 Characterization of Fauna in the Study Area (As Per W.P Act, 1972)

S. No	Schedule of Wildlife Protection Act 1972	No. of species	Remark
1.	Schedule I	0	-
2.	Schedule II	3	-
3.	Schedule III	2	-
4.	Schedule IV	47	-
5.	Schedule V	1	-
6.	Schedule VI	0	-

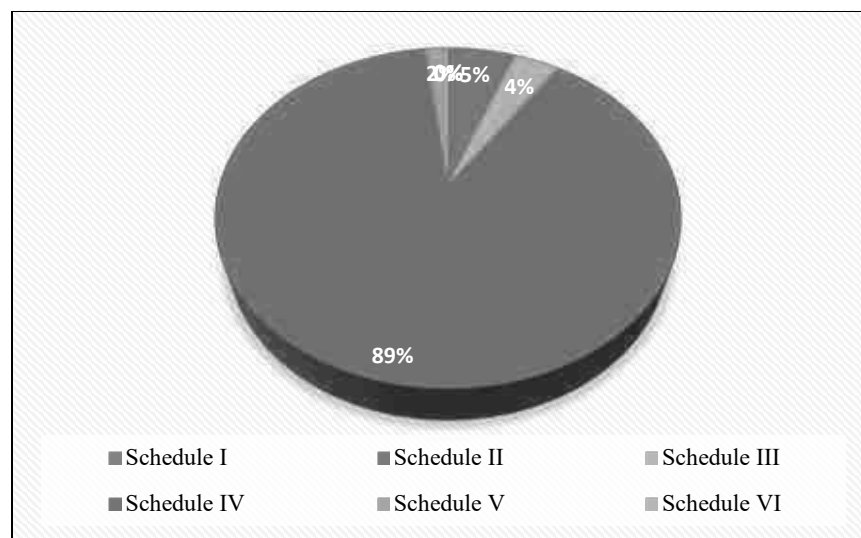


Fig No: 3.31. Schedule Of Wildlife Protection Act 1972

Table 3.36: Description of Flora & Fauna

S.No	Type of Species	Name	Local Name
Flora			
1.	Endangered species	None	None
2.	Threatened species	None	None
3.	Near Threatened species	None	None
4.	Vulnerable species	None	None
Fauna			
5.	Endangered species	None	None
6.	Threatened species	None	None
7.	Near Threatened species	None	None
8.	Vulnerable species	None	None
9.	Migratory Corridors & Flight Paths	No corridors & flight paths	-
10.	Breeding & Spawning grounds	None	-

A comprehensive Central Legislation namely Wild Life (Protection) Act was enforced in 1972 to provide protection to wild animals. Schedule-I of this act contains the list of rare and endangered species, which are completely protected throughout the country. The list of wild animals and their conservation status as per Wild Life Act (1972) presented in Table 3.63 are the species recorded/reported from the study area, out of which 3 species belongs to schedule-II, 2 species belongs to schedule-III, 1 species belongs to schedule-V and rest of the species belongs to schedule-IV of Wildlife protection Act, 1972.

The study area intersected by few natural drainage and lakes. A number of samples were investigated for enumeration of aquatic fauna. In order to study aquatic flora and faunal life one time survey was conducted during the winter season. Major component of the aquatic life under the study area are listed below

- Phytoplankton
- Zooplankton

- Aquatic vertebrates like fish, amphibians etc.

To assess the planktonic profile of Phytoplankton and Zooplankton, few water samples from nearby seasonal water bodies etc. of the project side were collected at sub-surface level. The aquatic ecological study was conducted in different water bodies of the study area and the flora and fauna was recorded.

3.6.3. Aquatic Flora

While considering assessment of aquatic pollution and its implications, it must be realized that, despite many changes in the physico-chemical properties of the water body and sediment, the ultimate consequences of pollutants may be reflected inevitably on the biological system. Hence, the investigations of an ecosystem and particularly of its communities constitute an integral part of any ecological assessment. This can be achieved by selecting a few reliable parameters from a complex community structure. The parameters considered have phytoplankton (cell count, and generic diversity), zooplankton (standing stock i.e., biomass and faunal groups), fishery and mammals as well as birds. The first two reflect the productivity of a water column at the primary and secondary levels, respectively. Benthic organisms being sedentary animals associated with the seabed, provide information regarding the integrated effects of stress, if any, and hence serve as good indicators of early warnings of potential damages.

3.6.3.1. Significance of Plankton

Planktons can be broadly grouped into two categories those with plant origin are called 'Phytoplankton' and those with animal origin are called 'Zooplankton'.

3.6.3.2. Significance of Phytoplankton

In aquatic environments, phytoplanktons are the main primary producers of organic matter, particularly in seas where they account for 90% of the production. When taken as a whole, they either directly or indirectly sustain all animal populations. In the spring, phytoplanktons are exposed to more intense light from the upper sun when the water column becomes shallow. One of the main abiotic elements that promotes phytoplankton growth is light. The enormous accumulation of phytoplankton in the spring directly supplies fresh organic carbon to nourish the zooplankton, which supports fish, crabs, mollusks, and avian species—larger aquatic animals.

Phytoplankton group reported from the study area were Basillariophyceae, Chlorophyceae, and Myxophyceae and Euglenophyceae members. About 4 species of phytoplankton were reported from all the locations. Dominance of Bacillariophyceae members followed by Myxophyceae was observed in studies samples.

Table No: 3.37. Phytoplankton species

S.No	Name of species	Name of Family
1.	Achnanthes affinis	Achnanthaceae
2.	Spirulina sp., Oscillatoria sp.	Myxophyceae
3.	Ankistrodesmus falcatus, Pediastrum boryanum, Scenedesmus bijuga	Chlorophyceae
4.	Synedra balthica	Fragilariaceae

3.6.3.3. Significance of Zooplankton:

Because they help move biological production from phytoplankton to larger species in the food web, zooplanktons are important. Numerous types of phytoplankton are fed on by tiny copepods, tunicates, protozoans, and other crustaceans. These then feed other animals, creating a further link in the food chain. As a result, fluctuations in plankton production would have an impact on the survival of juvenile fish that depend on them.

Table No: 3.38. Zooplankton Species

S.No	Name of species	Name of Family
1.	Mesocyclops leuckarti, Mesocyclops hyalinus	Cyclopidae
2.	Penilia avirostris, Evadna tergestina, Daphnia sp.	Cladocera
3.	Filinia sp., Asplanchna sp.	Rotifera
4.	Keratella monospina, Brachionus caudatus	Brachionidae

3.6.3.4. Aquatic Fish Fauna

Among all the aquatic life in the study area the fish fauna occupies an important place. The fish fauna of the area includes: Major carps includes Catla, Rahu, Mirgal, Exotic carps includes Silver carp, Grass carp, Minor carps etc.

3.6.3.3. Aquatic Faunal Diversity

Amphibian species like the common Indian Burrowing frog, and green pond frog, and etc. were sighted near the water bodies located in the study area.

Table no. 3.39. Amphibians Observed/Recorded from the Study Area

SI. No	Scientific Name	Common Name/English Name	Schedule list wildlife Protection act 1972
1.	Sphaerotheca breviceps	Indian Burrowing frog	Schedule IV
2.	Euphlyctis hexadactylus	Green pond frog	Schedule IV
3.	Bufo melanostictus	Indian Toad	Schedule IV
4.	Euphlyctiscynophlyctis	Skipper	Schedule IV

3.6.3.4. Aquatic Vegetation

Aquatic weeds are found to be growing everywhere in 10 km radius area, in every water bog, pond, etc. Typha angustata can be found growing all along the drains of villages, small water-logged depressions, and agricultural fields lacking water but containing enough moisture to support its growth. And where water is present, Eichhornia crassipes has taken its roots and covers the entire water surface by its sprawl and invasion. All the aquatic plant species listed in Table 3.67.

Table No: 3.39. List of aquatic plants observed in the study area

S.No	Scientific Name	Common Name	Type
1.	Typha angustifolia	Lesser Bulrush	Emergent hydrophytes
2.	Ipomea aquatica	Water Morning Glory	Marshy amphibious hydrophytes
3.	Hydrilla verticillata	Hydrilla	Submerged hydrophytes
4.	Pistia stratiotes	Water lettuce	Free floating hydrophytes
5.	Cyperus articulatus	Jointed flatsedge	Emergent Hydrophytes
6.	Eichhornia crassipes	Common water hyacinth	Free floating hydrophytes

*LC- Least Concern, NA-Not yet assessed

3.10. Findings/Results

The assessment was carried out during the Post monsoon season. The inspection day was quite all right with respectable weather. The details of the flora and fauna observed are given below.

S. No	Ecological sensitive habitat	Direction and Distance from the project site
1.	National Parks/ Wildlife Sanctuary/ Biosphere reserves/ Elephant Reserve/ Any Other Reserve	Nil
2.	Reserved Forests	There is no Reserve forest situated within in 1 km radius. The nearest Reserve Forest is Peddathalapalli R.F-2.30km-SW.
3.	Wildlife Corridors & Routes	No notified wildlife corridors are present in 10 km vicinity.
4.	Wetlands / Water bodies	-
5.	Ramsar Site	Nil
6.	Important Bird Habitats	Nil
7.	Breeding/nesting areas of endangered species	Not present
8.	Mangroves	None

There are no critically endangered, endangered, vulnerable, and endemic species were observed. As the rainfall in the area is scanty and as no toxic wastes are produced or discharged on account of mining, the proposed mining activity is not going to have any additional and adverse impacts on these RET species. There are no ecologically sensitive areas or protected areas within the 10 Km radius. Hence no specific conservation for conservation of any RET species or Wildlife is envisaged.

3.8. Conclusion

The observations and assessment of the overall ecological scenario involve details such as classification of Biogeographic zone, eco-region, habitat types, and land cover, distances from natural habitats, vegetation/forest types, and sensitive ecological habitats such as Wetlands sites, Important Bird areas, migration corridors of important wildlife etc. Such baseline information provides better understanding of the situation and overall ecological importance of the area. This baseline information viewed against proposed project activities help in predicting their impacts on the wildlife and their habitats in the region. Data collected and information gathered from secondary literature on flora, fauna, protected area, natural habitats, and wildlife species etc., and consulted and discussed with local people, from the villages, herders and farmers who inhabit close to the proposed project area.

3.6 SOCIO ECONOMIC ENVIRONMENT

An essential part of environmental study is socio-economic environment incorporating various facts related to socio-economic conditions in the area, which deals with the total environment. Socio economic study includes demographic structure of the area, provision of basic amenities viz., housing, education, health and medical services, occupation, water supply, sanitation, communication, transportation, prevailing diseases pattern as well as features of aesthetic significance such as temples, historical monuments etc. at the baseline level. This would help in visualizing and predicting the possible impact depending upon the nature and magnitude of the project. Socio-economic study of

an area provides a good opportunity to assess the socio-economic conditions and possibly makes a change in living and social standards of the particular area benefitted due to the Project. It can undoubtedly be said that the project will provide direct and indirect employment and improve the infrastructural facilities and standards of living of the area.

3.6.1 Objectives of the Study

- The objective of this socio-economic study is:
 - To know the current socio-economic situation in the study area covering the sub factors of education, health, sanitation, water, employment and business
 - To recommend practical strategic interventions to improve the area
 - To help in providing better living standards
 - To help in providing better employment opportunities for locals in the study area.

3.6.2 Scope of Work

- ❖ To study the socio-economic environment of the study area
- ❖ Data collection during primary field survey and collate it with the secondary sources
- ❖ Identification of possible impacts from the project
- ❖ Prediction of probable impact due to the project
- ❖ Mitigation measures
- ❖ Action plan for the implementation of mitigation measures.

3.6.3 Methodology

Collection of Data

Data for this project was collected from primary sources like Field survey, Interviews of locals and secondary sources like Government department, Maps, Literature research etc. GEMS conducted the socio-economic **baseline survey using a survey team of Field Assistants and a Supervisor apprising them about the project area and relevant documents**. The Survey was conducted **using Simple Random Sampling method** with a well-structured questionnaire prepared enabling subjects to reply appropriately. The questionnaires were designed to suit the subjects considering their rural background enabling them to furnish correct information and data to the extent possible. Primary data has been collected at village level, household level by questionnaires and focused group discussions. The study area for the field survey has been divided into three major segments namely Primary Zone (0 - 3 km), Secondary Zone (3 - 7 km) and Outer Zone (7 - 10 km).

Presentation of Data and Analysis

The data collected were presented in a suitable, concise form i.e., tabular or diagrammatic or graphic form for further analysis. These tabulated data were interpreted and analyzed with the help of various qualitative techniques and ideographic approaches.

A detailed socio-economic survey was conducted in the buffer zone (10 km radius of the Roughstone quarry at village: Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu) to identify the social and economic impacts. To get an overview of the villager's views and preferences about the plant, socio-economic parameters i.e., population

growth, density, literacy etc. were taken to determine the impact of the quarry production on the human population of the study area.

3.6.4 Population Growth Rate

In 1991, there were only 21 districts in the State of Tamil Nadu. In 2001, eight new districts were created by reorganising the territorial jurisdiction. The nine districts are – Krishnagiri, Namakkal, Perambalur, Viluppuram, Thiruvarur, Nagapattinam, and Theni. The population and its growth trend are important economic factors in a developing economy.

Year	Tamil Nadu	India
1941	11.91	14.22
1951	14.66	13.31
1961	11.85	21.51
1971	22.30	24.80
1981	17.50	24.66
1991	15.39	23.86
2001	11.19	21.34
2011	15.61	5.96
2021	5.96	1.0

3.6.5 Krishnagiri District

Krishna' refers to 'black' and 'giri' refers to 'hill'. This district is gifted with black granite hillocks and named as "krishnagiri". The region came under the rule of Krishna Deva Raya and hence it might have been named after this king.

Krishnagiri district is bounded by Vellore and Thiruvannamalai districts in the East, Karnataka state in the west, State of Andhra Pradesh in the North Dharmapuri District in the south. Its area is **5143 Sq. Kms.** This district is elevated from 300m to 1400m above the mean sea level. Source: <https://krishnagiri.nic.in/about-district/district-at-a-glance/>

It is located between 11° 12'N to 12° 49'N Latitude, 77° 27'E to 78° 38'E Longitude.

3.6.6 Study Area

Detailed socio-economic survey was conducted in the study area (Core and buffer zone) within 10 km radius of the area village: Kothapetta Village, Krishnagiri Taluk, Krishnagiri District: Krishnagiri, Tamil Nadu. In order to determine the impact of the proposed project on nature and inhabitant. To get an overview of the villagers and their perspectives about this proposed activity, different demographic parameters and social aspects such population

density, sex ratio, literacy rate, worker ratio etc. has been identified, analyzed, studied together. These impacts may be beneficial or disadvantageous. If disadvantageous anticipated suggestions measures are advocated in order to have collective development.

3.6.7 Demographic pattern of 10km study area characteristics a comparative analysis

Table 3.40 Shows the socio-economic profile of the study area as compared to district, state and national level socio-economic profile

Particular	India	Tamil Nadu	Krishnagiri District	Study Area (10km Radius)
Area (in sq. km.)	3,287,263	130058	5143	326
Population Density/ sq. Km.	368	554	370	483
No. of Households	249454252	13357027	448053	59669
Population	1210569573	72147030	1879809	255882
Male	623121843	36137975	960232	128026
Female	587447730	36009055	919577	127856
Scheduled Tribes	104281034	794697	22388	850
Scheduled Castes	201378086	14438445	267386	32085
Literacy Rate	73%	80%	72%	66%
Sex Ratio (Females per 1000 Males)	943	996	956	999

Source: Census of India, 2011

Rough stone quarry is located in the Krishnagiri district of the State of Tamil Nadu. The Total No. of villages observed within the 10 km radius from the project area is 39. one taluk falls within the 10 km buffer area. The population as per 2011 Census records is 255882 (for 10 km radius) and there is total 59,669 households residing within the studied area. Average household size is 4 which is the standard family size in India. Sex ratio of the study area is 999 (females per 1000 males). Total SC and ST population distribution is 32,085,850 respectively. The literacy rate in the Study area is observed to be 66%. The village - wise demographic features of the study area as per area classification are given in Table 3.42 below:

3.6.8 Population Distribution

Total number of males in the study area is **128026** and females are **127856**. The sex ratio was calculated to be 999 females per 1000 males within the 10 km buffer area which is not very poor compared to the national sex ratio. Within the study area, it was observed child population is increasing as per census 2011 participation increase in current scenario due to proper treatment provided to infants this is because of the awareness of the family.

Table 3.41 Zone wise Demographic Profile of Study Area

Zone	No. of Villages	Total Household	Total Population	Male Population	%	Female Population	%
Primary Zone (0 - 3 Km)	3	18246	79678	39513	49.59	40165	50.41
Secondary Zone (3 - 7 Km)	15	20359	87867	43815	49.87	44052	50.13
Tertiary Zone (7 - 10 km)	21	21064	88337	44698	50.60	43639	49.40
Study Area (0-10 km)	39	59669	255882	128026	50.03	127856	49.97

Source: Census of India, 2011

**Figure No. 3.32 Population of study area**

- ✓ Above table identifies the presence of villages and their subsequent population divided under three zones from plant boundary (i.e., Primary, secondary and tertiary zone).
- ✓ Primary zone has 3 villages where as much as 18246 households with 79678 population are located. Mostly lying on Built-up land for their livelihood and substance.
- ✓ Secondary and tertiary zone both comprise of 15 and 21 villages having a total population of 87867 and 88337 respectively.

Figure No. 3.33 Village wise Sample size of Population of study area



Table 3.42 Village wise Demographic Profile of the Study Area (Core and Buffer Zone)

Sno	Name	No.of Households	Total population	Total Male	Total Female	Population below 6	Male below 6	Female below 6	SC population	SC Male	SC Female	ST population	ST Male	ST Female	Literate population	Male Literate	Female Literate
0-3km Radius																	
1	Kallukurikki	1334	6097	2967	3130	789	397	392	825	372	453	0	0	0	3931	2083	1848
2	Bayanapalli (Part)	526	2258	1151	1107	271	137	134	697	348	349	1	1	0	1484	847	637
3	Krishnagiri (M)	16386	71323	35395	35928	7748	4059	3689	7589	3672	3917	129	69	60	54766	28523	26243
		18246	79678	39513	40165	8808	4593	4215	9111	4392	4719	130	70	60	60181	31453	28728
3-7km Radius																	
1	Kodipalli	621	2735	1410	1325	302	139	163	240	120	120	0	0	0	1570	917	653
2	Chinnathimminayanapalli	1115	4794	2390	2404	524	257	267	1716	843	873	5	2	3	3067	1716	1351
3	Kothigutalapalli	1058	4402	2127	2275	451	230	221	1041	492	549	0	0	0	2946	1583	1363
4	Peddathanapalli	1274	5393	2648	2745	664	322	342	176	83	93	83	37	46	3092	1725	1367
5	Kundarapalli	1100	4702	2262	2440	533	256	277	460	230	230	0	0	0	3133	1698	1435
6	Billanakuppam	1046	4546	2327	2219	487	267	220	892	456	436	55	33	22	2727	1555	1172
7	Junjupalli	1177	4826	2309	2517	576	296	280	589	288	301	0	0	0	3170	1743	1427
8	Kathinayanapalli	1408	6060	2975	3085	691	357	334	1118	556	562	0	0	0	3971	2194	1777
9	Kammaampalli	1399	5759	2831	2928	674	350	324	295	139	156	2	1	1	3541	2019	1522
10	Boganapalli	1979	8763	4478	4285	1204	619	585	1762	927	835	15	8	7	5518	3156	2362
11	Peddatalapalli	2234	9773	4925	4848	1397	733	664	776	401	375	11	3	8	5729	3190	2539
12	Kondepalli	693	2729	1339	1390	315	149	166	64	28	36	0	0	0	1819	1053	766
13	Periamuthu	1969	8413	4230	4183	1013	535	478	1303	645	658	201	100	101	5208	2923	2285
14	Devasamudiram	475	2057	1016	1041	248	124	124	395	183	212	55	30	25	1333	724	609
15	Agasipalli	2811	12915	6548	6367	1743	932	811	2275	1153	1122	12	6	6	8199	4578	3621
		20359	87867	43815	44052	10822	5566	5256	13102	6544	6558	439	220	219	55023	30774	24249
7-10km Radius																	
1	Varatanapalli	1693	7102	3586	3516	777	394	383	365	187	178	97	51	46	4622	2560	2062
2	Palepalle	1847	7631	3698	3933	687	372	315	1092	558	534	43	22	21	5448	2832	2616
3	Balinayanapalli	1132	4761	2470	2291	521	281	240	495	258	237	0	0	0	3121	1767	1354
4	Orappam	1549	6796	3378	3418	737	390	347	779	370	409	0	0	0	4338	2385	1953
5	Gangaleri	766	3242	1617	1625	360	192	168	470	233	237	13	7	6	2011	1106	905
6	Kompalli	169	749	361	388	93	42	51	71	30	41	0	0	0	449	257	192
7	Sembadamuthur	554	2484	1300	1184	326	194	132	178	102	76	0	0	0	1395	830	565
8	Gooliam	437	2079	1039	1040	314	170	144	33	20	13	0	0	0	1083	618	465
9	Agaram	1452	5697	2856	2841	642	308	334	624	296	328	20	11	9	3297	1903	1394
10	Marigampalli	608	2523	1308	1215	240	117	123	219	111	108	66	32	34	1637	959	678
11	Bellarapalli	1140	4891	2479	2412	563	296	267	581	286	295	0	0	0	2938	1660	1278
12	Polupalli	626	2639	1318	1321	306	141	165	307	141	166	0	0	0	1575	907	668
13	Kurubarapalli	1171	5354	2760	2594	742	396	346	502	250	252	0	0	0	3100	1766	1334
14	Ragimanapalli	205	812	412	400	120	51	69	0	0	0	0	0	0	403	234	169
15	Achamangalam	974	4179	2150	2029	452	222	230	611	314	297	0	0	0	2821	1634	1187
16	Soolamalai	477	1966	1027	939	238	124	114	344	179	165	0	0	0	1174	704	470
17	Chendrapalli	1507	6467	3266	3201	783	395	388	1210	609	601	18	9	9	3817	2188	1629
18	Timmapuram	1524	6337	3176	3161	653	361	292	1376	676	700	17	6	11	4176	2342	1834
19	Katteri	1329	5172	2656	2516	563	301	262	207	108	99	4	3	1	2977	1772	1205
20	Sokkadi	1242	4931	2564	2367	514	283	231	408	201	207	3	3	0	2732	1629	1103
21	Modikuppam	662	2525	1277	1248	236	115	121	213	106	107	23	10	13	1625	951	674
	Total	21064	88337	44698	43639	9631	5030	4601	9872	4929	4943	281	144	137	54739	31004	23735
	G.Total	59669	255882	128026	127856	29261	15189	14072	32085	15865	16220	850	434	416	169943	93231	76712

Source: Village Wise Demographic Profile of the Study Area, Census of India, 2011

Table 3.43 Occupational Characteristics of the Study Area (Core and Buffer Zone)

Sno	Name	Total workers	Total Main workers	Main Cultivators	Main Agriculture Labourers	Main Other Tertiary workers	Non-Workers	Male Non-Workers	Female Non-Workers
0-3km Radius									
1	Kallukurikki	2409	2033	292	395	1301	3688	1360	2328
2	Bayanapalli (Part)	861	600	145	19	425	1397	550	847
3	Krishnagiri (M)	24559	23156	187	99	22230	46764	16324	30440
		27829	25789	624	513	23956	51849	18234	33615
3-7km Radius									
1	Kodipalli	1246	1211	287	549	327	1489	476	1013
2	Chinnathimminayanapalli	2726	2214	690	1256	239	2068	1006	1062
3	Kothigutalapalli	1956	1883	196	785	890	2446	956	1490
4	Peddathanapalli	2458	1961	458	695	784	2935	1140	1795
5	Kundarapalli	1869	1466	462	462	511	2833	1069	1764
6	Billanakuppam	2131	1989	862	561	501	2415	968	1447
7	Junjupalli	1954	1702	837	217	622	2872	1068	1804
8	Kathinayanapalli	2508	2310	513	951	822	3552	1424	2128
9	Kammaampalli	2841	2083	603	781	686	2918	1286	1632
10	Boganapalli	3404	2967	278	460	2123	5359	2159	3200
11	Peddatalapalli	3988	3540	475	542	2481	5785	2222	3563
12	Kondepalli	1084	845	371	144	318	1645	659	986
13	Periamuthu	3753	3031	849	656	1450	4660	1857	2803
14	Devasamudiram	755	715	28	67	617	1302	465	837
15	Agasipalli	4959	4053	568	894	2469	7956	3223	4733
		37632	31970	7477	9020	14840	50235	19978	30257
7-10km Radius									
1	Varatanapalli	3404	3107	722	1306	1029	3698	1534	2164
2	Palepalle	3597	2400	487	776	1087	4034	1614	2420
3	Balinayanapalli	2013	699	229	114	339	2748	1197	1551
4	Orappam	2719	2269	414	1027	803	4077	1671	2406
5	Gangaleri	1393	1170	318	354	494	1849	665	1184
6	Kompalli	408	396	198	161	28	341	149	192
7	Sembadamuthur	1343	1138	917	134	81	1141	600	541
8	Gooliam	1231	936	575	257	95	848	413	435
9	Agaram	2556	2421	515	1203	669	3141	1211	1930
10	Marigampalli	1300	1198	503	407	221	1223	508	715
11	Bellarapalli	2463	2097	624	800	650	2428	1043	1385
12	Polupalli	1407	1338	716	196	417	1232	517	715
13	Kurubarapalli	2235	1524	253	236	1008	3119	1290	1829
14	Ragimanapalli	509	314	221	15	10	303	145	158

15	Achamangalam	2157	1688	403	637	634	2022	840	1182
16	Soolamalai	965	869	175	293	398	1001	409	592
17	Chendrapalli	3084	2753	820	879	1009	3383	1297	2086
18	Timmapuram	2760	2393	682	811	841	3577	1424	2153
19	Katteri	2668	2410	1283	679	443	2504	1124	1380
20	Sokkadi	2787	2305	743	1073	441	2144	985	1159
21	Modikuppam	1212	979	191	290	496	1313	543	770
	Total	42211	34404	10989	11648	11193	46126	19179	26947
	Grant total	107672	92163	19090	21181	49989	148210	57391	90819

Source: Village Wise Demographic Profile of the Study Area, *Census of India, 2011*

3.6.9 Gender and Sex Ratio

Sex ratio is used to describe the number of females per 1000 of males. Sex ratio is a valuable source for finding the population of women in India and what is the ratio of women to that of men in India. In the Population Census of 2011, it was revealed that the population ratio in India 2011 is 940 females per 1000 of males. The study area has 999 females per 1000 males. Gender and sex ratio determine the Human Development Index (HDI) of an area thereby understanding the status of women in that region. Following table entails information about sex ratio of 39 villages lying in study area (buffer zone) as primary, secondary and tertiary zone.

Table 3.44: Sex ratio of the study area

S. No.	Buffer Zone	Sex Ratio of Study area Female/ 1000 Male
1	Primary Zone (0-3 km)	1017
2	Secondary zone (3-7 km)	1005
3	Tertiary Zone (7-10 km)	976

Source: *Census of India, 2011*

Figure 3.34 Sex Ratio within 10 Km study area

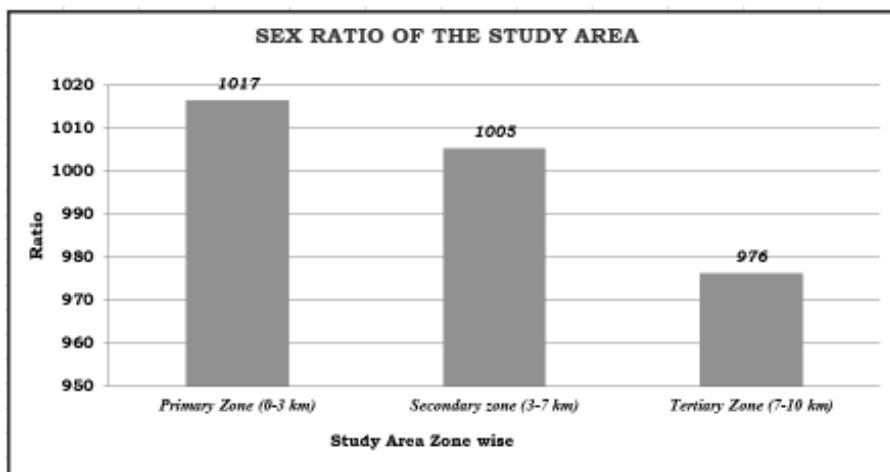
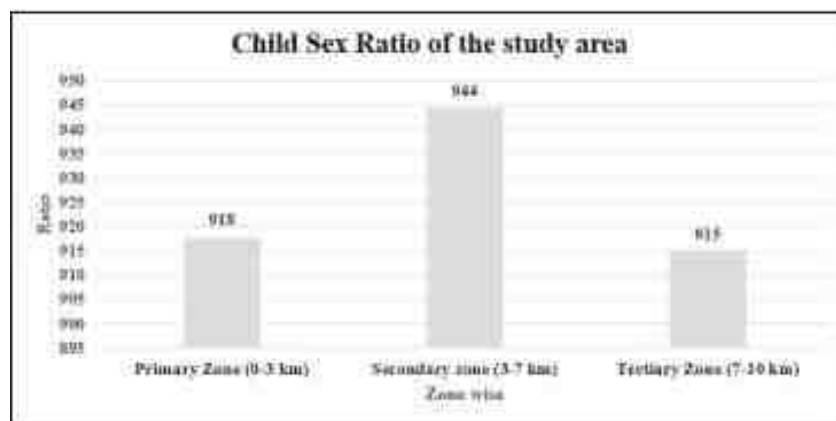


Table 3.45: Child Sex ratio of the study area

S. No.	Buffer Zone	Sex Ratio of Study area Female/ 1000 Male
1	Primary Zone (0-3 km)	918
2	Secondary zone (3-7 km)	944
3	Tertiary Zone (7-10 km)	915

**Figure 3.35 Child Sex Ratio within 10 Km study area**

3.6.10 Literacy Rate in Study Area

Literacy is the ability to read and write one's own name and further for knowledge and interest, write coherently, and think critically about the written word. The analysis of the literacy levels is done in the study area. The 10 km radius study area demonstrates a literacy rate of 70% as per census 2011. The male literacy rate works out to be 76.74% whereas the female literacy rate, which is an important factor for social change, is observed to be 63.18% in the study area. This indicates that the education facilities in the villages are not up to the mark and there is need to be aware as the female literacy as it is very important for our society and from the survey it is clear that the literacy rate of female is far low comparison to male.

Table 3.46 Literacy Rate of the Study Area

Zone	No. of Villages	Male Literacy Population	Male literacy Rate	Female Literacy Population	Female literacy Rate	Total Literacy	Total Literacy Rate
Primary Zone (0 - 3 Km)	3	31453	90.07	28728	79.91	60181	84.92
Secondary Zone (3 - 7 Km)	15	30774	80.46	24249	62.50	55023	71.42
Tertiary Zone (7 - 10 Km)	21	31004	78.16	23735	60.80	54739	69.55
Study Area (0-10km)	39	93231	82.62	76712	67.42	169943	74.99

Source: Census of India, 2011

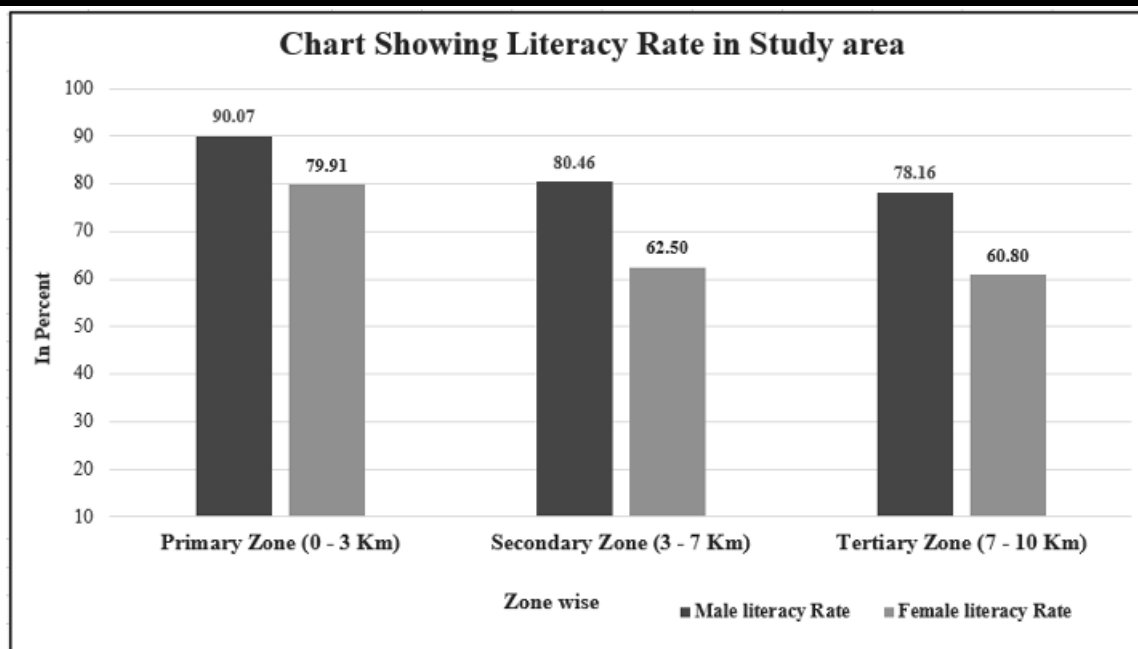


Figure 3.36 Gender wise Literacy Rate in the study area

3.6.11 Vulnerable Group

While developing an action plan, it is very important to identify the population that falls under the marginalized and vulnerable groups and special attention should be given towards these groups while making action plans. In the observed villages schedule caste (SC) population is ~13% and Schedule Tribe population ~0.33% in study area. 87% population observed as other.

Table 3.47 vulnerable groups of the study area

Zone	No. of Villages	Vulnerable Groups					
		SC Population	%	ST Population	%	Other Population	%
Primary Zone (0 - 3 Km)	3	9111	11.43	130	0.16	70437	88.40
Secondary Zone (3 - 7 Km)	15	13102	14.91	439	0.50	74326	84.59
Tertiary Zone (7 - 10 Km)	21	9872	11.18	281	0.32	78184	88.51
Total area (10km)	39	32085	12.54	850	0.33	222947	87.13

Source: Census of India, 2011

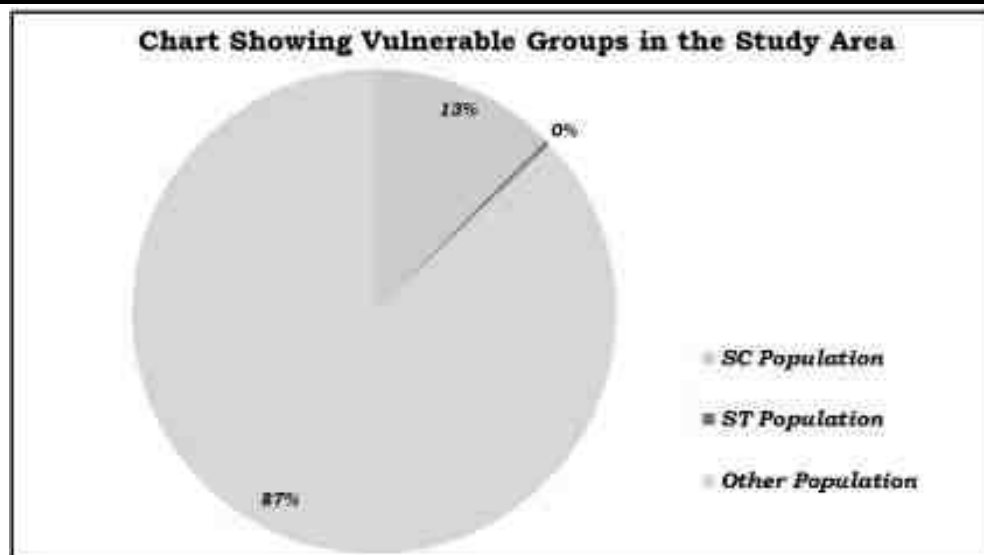


Figure 3.37 vulnerable groups

3.6.12 Economic Activities

The economy of an area is defined by the occupational pattern and income level of the people in the area. The occupational structure of residents in the study area is studied with reference to work category. The Population is divided occupation wise into three categories, viz., main workers, marginal workers and non-workers. The workers include cultivators, agricultural labourers, those engaged in household industry and other services. The marginal workers are those workers engaged in some work for a period of less than 180 days during the reference year. The non-workers include those engaged in unpaid household duties, students, retired persons, dependents, beggars, vagrants etc. besides institutional inmates or all other non-workers who do not fall under the above categories.

Table 3.48 shows the work force of the study area

Zone	No. of Villages	Total Workers	%	Main Workers	%	Marginal Workers	%	Non-Workers	%
Primary Zone (0 - 3 Km)	3	27829	34.93	25789	32.37	220	0.28	51849	65.07
Secondary Zone (3 - 7 Km)	15	37632	42.83	31970	36.38	4241	4.83	50235	57.17
Tertiary Zone (7 - 10 Km)	21	42211	47.78	34404	38.95	5001	5.66	46126	52.22
Study Area (10 Km)	39	107672	42.08	92163	36.02	56047	21.90	148210	57.92

Source: Census of India, 2011

Total working population within the 10 km study area are 42.08%, where 36.02% are main workers and 21.9% of the total working population are marginal worker 58% of the total population are non-Workers.

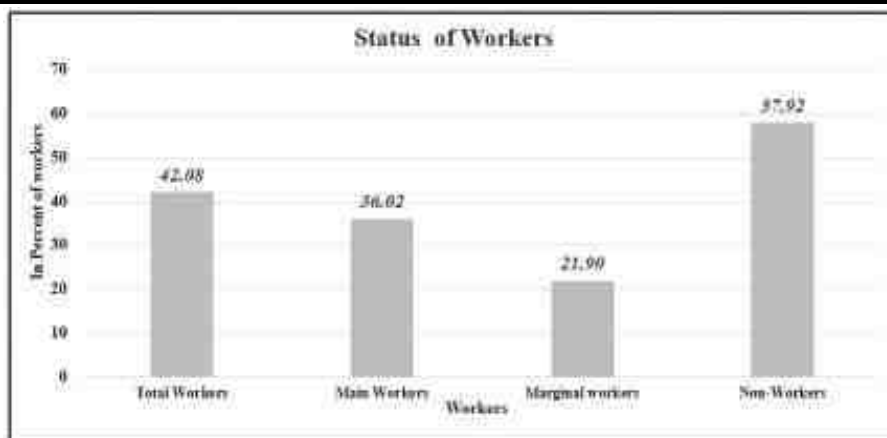


Figure 3.38 Working population in the study area

3.6.13 Population Projection of the Study Area

Krishnagiri Population 2021 – 2030

The last census of Krishnagiri was done in 2011 and next census of 2021 has been postponed or cancelled. But we can do projection of future Krishnagiri 2022 Population on the basis likely Population Growth Rate.

Year	Projected Population (Estimation)
2001	1561118
2011	1879809
2021	2198500
2025	2325976
2030	2485322

Source: <https://www.census2011.co.in>

A population projection is an estimation of the number of people expected to be alive at a future date that is made based on assumptions of population structure, fertility, mortality and migration. It is an essential to assess the need for new jobs, schools, doctors and nurses, planning urban housing, foods, clothing and requirements of energy and resources. It is also needed for policy discourse i.e., helps to the policy-makers to understand the existing problems and finally supports to develop the suitable solutions.

A population projection gives a picture of what the future size and structure of the population by sex and age might look like. It is based on knowledge of the past trends, and, for the future, on assumptions made for three components: fertility, mortality and migration.

Table 3.49 Total Population of Study Area

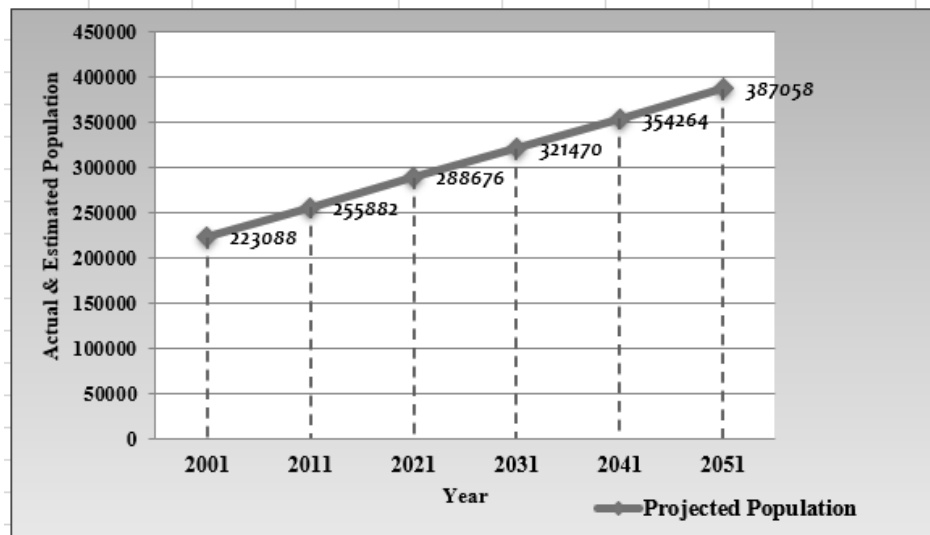
SI No.	Population in 2001	Population in 2011
1	223088	255882

Source: <https://censusindia.gov.in/census.website/>

Table 3.50 Population Projection of Study Area

S. No	Year	Projected Population (Approximately)
1.	2021	288676
2.	2031	321470
3.	2041	354264
4.	2051	387058

Source: Calculated by SPSS V23 Linear Regression Method.

**Figure 3.39 Graph Showing Population Projection**

Following formula has been used for the projection of population.

$$Y=a+bt$$

Where: Y= Dependent variable (Population)

a=Intercept

b=Slope

t=Interdependent variables (Time)

Above formula is applied to project population for the years (2021, 2031, 2041, 2051). Due to avoid the errors in manual calculation the statistical software SPSS (demo version 23) is used to calculate the intercept and the slope.

Due to the shortage of data on population the results show same value of growth for the years (2021,2031,2041,2051). If the researcher gets enough the data on population for earlier years the data projection will be accurate.

- Ref: Indian Economic survey, the SLR (Simple Linear Regression) techniques are used by statistical department, Government of India to project population.
- Source: <https://www.ibm.com/in-en/analytics/spss-statistics-software>

3.6.14 Population Growth of the Study Area

Table 3.51 Population Growth rate in Study area

Year	Actual Population	Growth Rate %
2001	223088	
2011	255882	11.47
2021	288676	11.28
2031	321470	11.14
2041	354264	11.02
2051	387058	10.93

Source: Compiled by Author-2022

Above table no 3.41 is showing the growth rate of population since 2001, as per census in 2001 the population of study area was 233088 and 2011 it was 255882 if the population growth rate is 11.47%, it will approximately gradually an increase about 288676 in year 2021 and 387058 in the year of 2051. It has approximately population growth rate decline will be 10.93%.

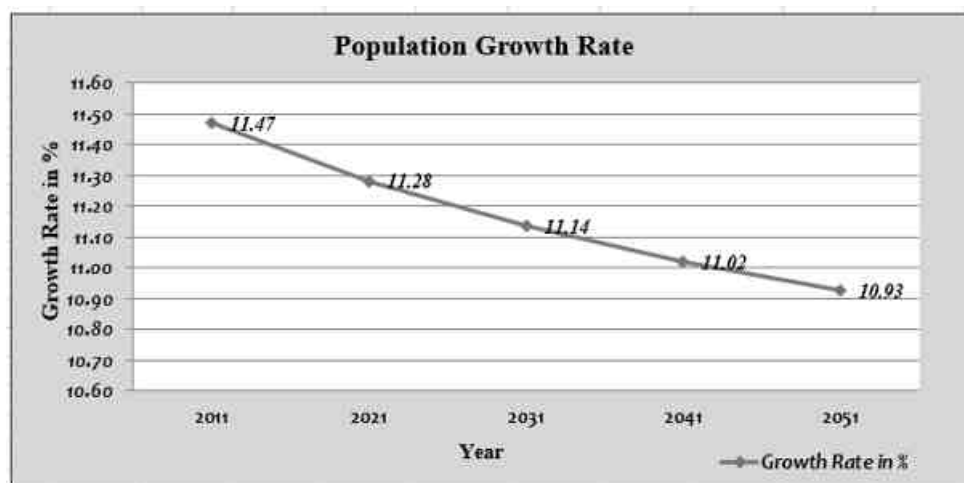


Figure.3.40 Graph Showing Population Growth Rate

Planning Analysis:

Calculating Growth Rates

The percent change from one period to another is calculated from the formula:

Where:

PR=Percent Rate

 $V_{Present}$ =Present or Future Value V_{Past} = Past or Present Value

$$PR = \frac{(V_{Present} - V_{Past})}{V_{Past}} \times 100$$

The *annual* percentage growth rate is simply the percent growth divided by N, the number of years.Source: <https://pages.uoregon.edu/rgp/PPPM613/class8a.htm>**3.6.15 Structure Map 300m Radius-P1****Figure.3.41 Structure Map 300m Radius-P1****Table 3.52 Structure details 300m radius-P1**

Distance Range	No. of Structures	Type of Structures (Kuchcha/ Brick/ Cement/ RCC/ Framed Structures)	Usage/ Purpose	No. of occupants	Ownership (Belongs to PP/ Not belongs to PP)	Remarks
0-50m-NIL						
50-100m	1	Shed – 1 No	Used to store mines documents	Nil	Belongs to PP	Nil
100-200m	4	Crusher Shed – 1 No Shed – 1 No Factory – 1 No Factory Shed – 1 No	Used to store M-sand, P – Sand & Jelly Used to store mines equipment	Nil	Belongs to PP	For Crusher – Working Time: 8 AM – 5 PM

						6 Nos of Employees
200-300m	4	Labour Shed – 1 No Mines Shed – 1 No Shed – 1 No Pulp Factory – 1 No	Used as Rest shelter for labour Used to store mines documents Storage purpose Commercial	Nil	Belongs to PP	No stay

3.6.16 Structure Map 300m Radius-P2

Figure.3.42 Structure Map 300m Radius-P2

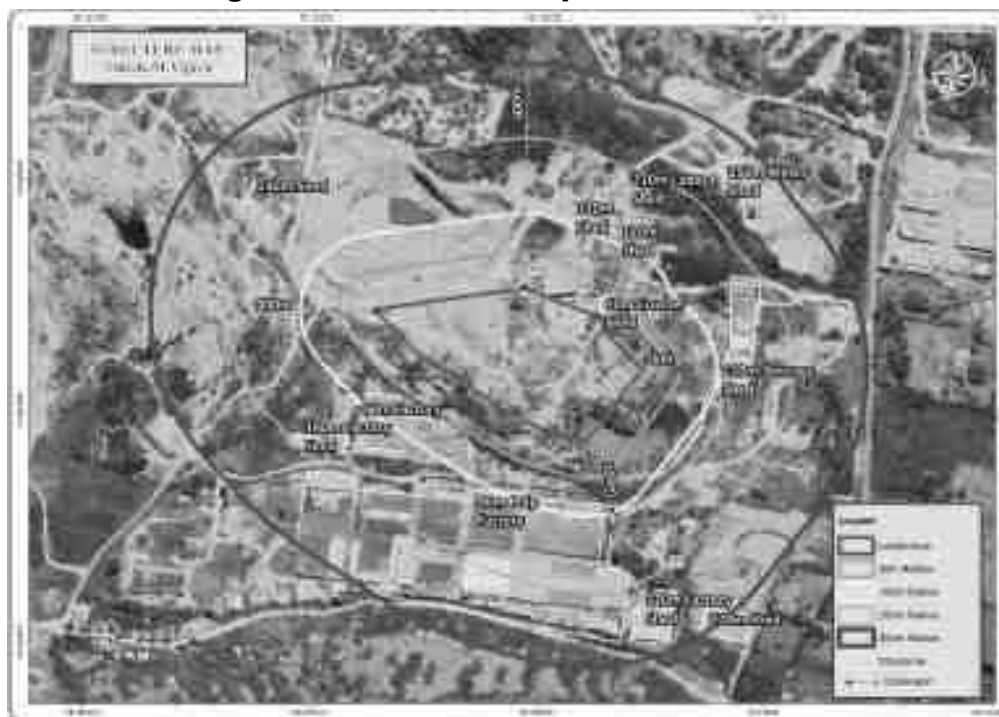


Table 3.53 Structure details 300m radius-P2

Distance Range	No. of Structures	Type of Structures (Kuchcha/ Brick/ Cement/ RCC/ Framed Structures)	Usage/ Purpose	No. of occupants	Ownership (Belongs to PP/ Not belongs to PP)	Remarks
0-50m	1	Crusher Shed – 1 No	Used to store mines documents and equipment	Nil	Belongs to PP	Nil
50-100m	2	Factory – 1 No Pulp Factory – 1 No	Commercial	Nil	Belongs to PP	Nil
100-200m	4	Storage Shed – 1No Shed – 2 Nos Factory Shed – 1 No	Used to store mines equipment Storage purpose Storage Purpose	Nil	Belongs to PP	Nil

200-300m	5	Labour Shed – 1No Mines Shed – 1No Factory Shed – 1 No Shed – 2 Nos	Used as Rest shelter for labour Used to store mines documents Storage purpose Storage purpose	Nil	Belongs to PP	No Stay
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3.6.17 Structure Map 300m Radius-P3

Figure.3.43 Structure Map 300m Radius-P3

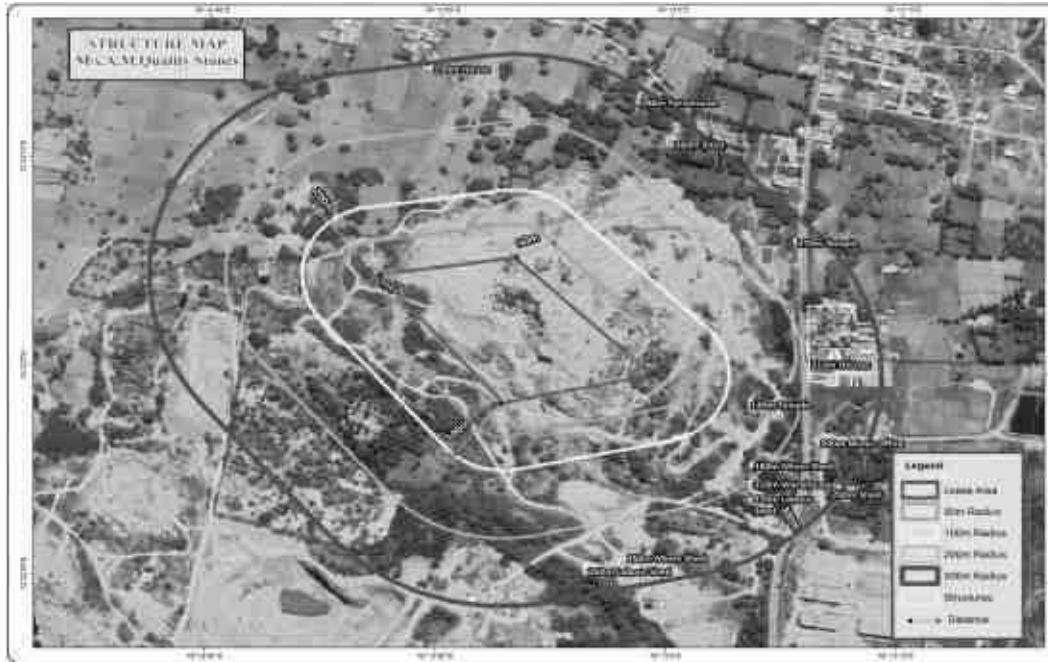


Table 3.54 Structure details 300m radius-P3

STRUCTURE ENUMURATION							
0-200m Radius – 1 No							
Structure Numbers	Type of Structure	Usage Purpose	Commercial / industry / residential / farm house / Govt. building	Occupants of Building/ Structure	Structure belongs to owner	Structure Not belongs to owner	Remarks
1	Temple– 140m – East	Used for Worshipping	Govt. Building	-	No	Yes	No Stay
1	Mines Shed – 180m – SE	Used to store mine equipment	Commercial	-	No	Yes	No Stay
STRUCTURE ENUMURATION							
200-300m Radius – 71 Nos							

Structure Numbers	Type of Structure	Usage Purpose	Commercial / industry / residential / farm house / Govt. building	Occupants of Building/ Structure	Structure belongs to owner	Structure Not belongs to owner	Remarks
1	Warehouse – 210m – SE	Used as storage	Commercial	-	No	Yes	No Stay
	Habitation 210m East	Resident	Residential	-	-	-	Detailed structure study will be carried out during the EIA study
2	Labour Shed – 220m & 260m	Used as rest place for labours	Commercial	-	No	Yes	No Stay
1	Mines Office – 240m – SE	Used to store documents	Commercial	-	Yes	No	No Stay
1	Mines Shed – 260m – South	Used to store mine equipment	Commercial	-	No	Yes	No Stay

**STRUCTURE ENUMERATION
200-300m Radius – 71 Nos**

Structure Numbers	Type of Structure	Usage Purpose	Commercial / industry / residential / farm house / Govt. building	Occupants of Building/ Structure	Structure belongs to owner	Structure Not belongs to owner	Remarks
1	Shed – 260m – NE	Used to store agriculture materials	Commercial	-	No	Yes	No Stay
1	Temple – 270m – East	Used for Worshipping	Govt. Building	-	No	Yes	No Stay
1	Farmhouse – 280m – NE	Used to agriculture goods and materials	Commercial	-	No	Yes	Occasional Stay
1	House – 290m – North	Used as resident	Residential	2 Nos	No	Yes	2 peoples are staying

1	Shed – 290m – SE	Used to store agriculture materials	Commercial	-	No	Yes	No Stay
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Source: field visit data, Krishnagiri

3.6.18 Infrastructure Base

A. EDUCATION FACILITIES

Education and learning are one of the most important processes in today's society. Education is not just restricted to teaching a person the basic academics, say computers, mathematics, geography or history, education is a much larger term. It is really a means to discover new things which we don't know about and increase our knowledge. Government has provided educational facilities in each village instead some villages do not have school facility. According to census India handbook 2011, Primary Schools are available in every village and Middle, Secondary and Senior Secondary School (depend on population size) are available in some of the villages. It can be concluded from the available census data that people have to go far away from the villages for colleges and schooling. For higher education people have to migrate to the bigger cities. Educational and literacy details were collected from census India handbook 2011 and we observed lack of Education. After analysing the literacy rate from census data, we found that literacy rate is good. The available educational structure for the population in the case study area is mentioned in the table below.

Table 3.55. Educational facilities in the study area

Zone	No. of Villages	Primary School	Middle School	Higher Secondary School	Govt.College
Primary Zone (0 - 3 Km)	3	3	1	2	-
Secondary Zone (3 - 7 Km)	15	3	1	3	4
Tertiary Zone (7 - 10 Km)	21	2	2	4	-
Study Area (10 Km)	39	8	4	9	4

Source: DCHS census 2011,

B. HEALTH FACILITIES

Health is a premier asset of human capital which is an important factor for growth of any economy. It is a source of human welfare. Health and nutrition play a major role for developing a healthy society as it impacts the productivity of a person. The healthcare facilities in the study area consisted of Primary Health Centre (PHC), Primary Health Sub-Centre's (PHSC), Maternity and Child Welfare Centre (MCWS), Dispensaries and TB Clinic, Veterinary hospitals (VH), Non-Govt. medical facilities Medicine shops (MS), sub-centres and Primary Health Centres. As per the data of 10 km radius study area collected from Census India Handbook 2011, medical facilities are far below the basic need and patients have to move to Cities for any serious illness. So, the action plan which is to be prepared should focus on the more improvement of health facilities.

Table 3.56 Health/ Medical Facilities in the Surveyed Area

Zone	No. of Villages	Community Health Centre	PHC/GH	Primary Health Sub Centre	Maternity Child welfare Centre	Hospital Allopathic	Dispensary/Health centres	Veterinary Hospital	Family welfare centres	Non-Government Medical
Primary Zone (0 - 3Km)	3	0	1	0	0	0	0	0	0	1
Secondary Zone (3- 7Km)	15	1	3	0	1	0	0	1	1	5
Tertiary Zone (7- 10km)	21	0	5	2	1	0	1	1	1	10
Study Area (10 Km)	39	1	5	2	2	0	1	2	2	16

Source: DCHS, census 2011. Tamil Nadu.

3.16.6 Other activities

1. Electrification in the Area

The source of electricity is fulfilled by the Government. Most of the villages are electrified and power supply is good in the study area.

2. Drinking Water Facilities:

As per the data collected from census India handbook 2011, it has been noticed that the requirement of drinking water is being fulfilled by Well and handpumps and lakes. All villagers are availing drinking water facilities from Hand pumps. The drinking and domestic water sources are open wells and hand pumps, tanks.

3. Transport and Road Infrastructure Facilities

Villages have fare road connectivity and Private bus operators operate transport service in the villages. Road condition of the villages is good and the area is well connected with the two major highways such as NH – 44 – Salem to Bangalore direction, SH – 225 Krishnagiri to Rayakottai direction connecting Road. As per the survey, in some villages, there are proper roads with the bus stops available for the people convenience.

4. Electrification

All the villages surveyed in the study area were electrified. Electricity is available for the various domestic, non-domestic, industrial, agricultural and public lighting purposes. But being a rural area, the electric supply is discontinuous most of the times and is supplied in shifts (eight hours in the morning or evening).

3.16.7 ECONOMIC EXPOSURE AND DEVELOPMENT

Implementation of the project will make financial institutions as well as related economic facilities, infrastructure and services available to the people. This will expose and introduce the local population to factors of economic development including the banking system, financial services, and credit and investment schemes. The exposure will enable community members to invest their income and prevent dependency or living a life of “tomorrow will take care of itself”.

3.16.8 ADVERSE SOCIAL IMPACTS**Health Impacts**

The project has the potential for triggering health impacts through increased dust, creation of breeding grounds for disease vectors, population influx which might introduce new diseases in the area, and inadequate sanitation facilities.

Noise and Vibration

The mining activity is carrying out by eco-friendly surface miner without drilling & blasting. The noise & vibration is generated only for short time due to transportation of vehicles thus there is no major adverse impact has seen.

Livelihood change

Due to the labour intensity of the mining sector, the project will attract the more able-bodied persons from the community which in turn will lead to low labour availability in other sectors of the economy including agricultural, education and health skilled workers. Local employment opportunities to be created by the project. This impact will not be significant due to low level of education and skills in the area which will result in sourcing skilled workforce from outside the immediate area. But the magnitude of this impact will be high due to high number of dependents in a household.

Managing Loss of Livelihood and Income

To cushion the population against impacts of mine closure, comprehensive retrenchment packages that include adequate advance warning to employees and contractors to allow them to source alternative opportunities should be undertaken. Skills development programmes should also be undertaken well before the closure of the Plant. However, adequate protection measures will be taken by the mine management to take care of environment and to guard against adverse environmental impact.

3.16.9 Inference of the Socio-economic Study

- The Socio-Economic study provides the clear picture of demographic as well as economic attributes such as population, average household size, working, non-working population, literacy rate, sex ratio, occupation etc.
- Percentage of the male population is observed to be higher than women population with the study area. As observed, the majority of the villages are spatially distributed with the secondary zone of the study area. The sex ratio is 968 females of every 1000 males in the study area which is not very poor compared to the national sex ratio.
- As far as the literacy rate is concerned, the study area has an average level as the literacy rate of people is growing.
- Vulnerable people are very low in the buffer zone area.

3.16.10 Morbidity Pattern

Morbidity rate refers to the rate at which a disease or illness occurs in a population and can be used to determine the health of a population and its healthcare needs. Illnesses can range from acute to chronic, long-lasting conditions. There is no such major morbidity pattern has been found in the area as per the data sources of the health department. Some minor morbidity may be seen like respiratory diseases were commonest morbidity followed by cataract, cardiovascular. As the age increases chances of getting morbidities were more. Also, water quality results of

some of the villages indicates that there is fluoride content in the ground water which may lead to fluorosis disease among the population.

3.16.11 Recommendation and Suggestion

The village development plans are made in consultation with the community through Gram Sabah; these appear to address the needs of the community. However, it may be noted that at the implementation stage these plans often are fraught with problem of inadequate funds, lack of proper planning, corruption, vested interests and political agendas. Hence while ascertaining the scope for convergence with the government activities, care must be taken to ascertain realistic possibilities for implementation.

- Women empowerment– Home based income generation activities, vocational training programme, Common education centre for increase the literacy.
- Education – free uniform, construction of common rooms, secondary schools, colleges and library, computer education and physical education, additional schools for girls, furniture and equipment in schools to promote education.
- Vocational Trainings – establishment of a vocational training center within the villages with a curriculum designed to suit market demands. Vocational training for disability persons.
- Agriculture/livestock –infrastructure such as agriculture electric connections, assistance with buying improved tools and equipment, capacity building, supply and/or knowledge of better variety of seeds, pasture land development and trainings on animal husbandry& facility of veterinary doctor.
- Health – improvement in sanitary conditions of the villages, assistance with construction of latrines, improvement in drainage system, health camps and awareness campaigns for diseases like malaria, typhoid, tuberculosis, yellow fever and pneumonia. Repairing of PHCs and Aanganbadi centers, Provision of water tanks at discreet village locations for sanitation, extending health facility to needy amongst surrounding villages, ambulances to local health centres in improving facility to public health. Establishment of new PHCs and medicinal shops.
- Persons with disability: Establishment of center for special education, sensitization of the community towards disabled and awareness on Govt.
- Roads-- Laying of new roads and pucca roads in the study area which can increase in the transportation facilities.

3.16.12 CONCLUSION

The environment baseline study was conducted in the project area by both secondary data and primary data collections. Abiotic factors including air, water and soil were studied for the core and buffer zone. It was found that most of the parameters were within the limits as per the Standards. Similarly, the study for the biotic factors was conducted. It can be concluded that the present environment status of the study area is good enough for the project activity. Adoption of adequate pollution control measures will protect the surrounding environment.

Social Impact assessment study was also conducted during the study period which revealed that area further require improvement in the Economy, Employment and Infrastructure Development of the area. Hence, it can be concluded that the present baseline environment status of the study area will not be affected by the project Proponent will adopt adequate control measures to protect the surrounding environment and will contribute in social & economic development of the areas in vicinity & study area.

CHAPTER – 4: ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.0 *General*

The environmental impact can be categorized as either primary or secondary, primary impacts which are attributed directly by the project; secondary impacts are those which are indirectly induced. The open cast mining operations involve development of benches, Approach Road, Haul Road, Excavation and handling of material. If adequate control measures are not taken to prevent/mitigate the adverse environmental impacts/lead to damage of the eco-system.

In order to maintain the environmental commensuration with the mining operation, it is essential to undertake studies on the existing environmental scenario and assess the impact on different environmental components. This would help in formulating suitable management plans for sustainable resource extraction. Based on the baseline environmental status at the existing mine site, the environmental factors that are likely to be affected (Impacts) are identified, quantified and assessed. The various anticipated impacts will be on.

- Land environment
- Water Environment
- Air Environment
- Noise Environment
- Socio economic environment
- Solid waste
- Soil environment

4.1 *Land Environment*

4.1.2 Anticipated Impact from all Proposed Projects

- Permanent or temporary change on land use and land cover.
- Change in Topography: Topography of the ML area will change at the end of the life of the mine.
- Movement of heavy vehicles sometimes cause problems to agricultural land, human habitations due to dust, noise and it also causes traffic hazards.
- Due to degradation of land by pitting the aesthetic environment of the core zone may be affected.
- Earthworks during the rainy season increase the potential for soil erosion and sediment laden water entering the water ways.
- If no due care is taken wash off from the exposed working area may choke the water course & can also causes the siltation of water course

4.1.2.1 Common Mitigation Measures for Respective Individual Proposed Projects

- The mining activity will be gradual confined in blocks and excavation will be undertaken progressively along with other mitigative measures like phase wise development of greenbelt etc.,
- Construction of garland drains all around the quarry pits and construction of check dam at strategic location in lower elevations to prevent erosion due to surface runoff during rainfall and also to collect the storm water for various uses within the proposed area.

- Green belt development along the boundary within safety zone. The small quantity of water stored in the mined-out pit will be used for greenbelt.
- Thick plantation will be carried out on unutilized area, top benches of mined out pits, on safety barrier, etc.,
- At conceptual stage, the land use pattern of the quarry will be changed into Greenbelt area and temporary reservoir.
- In terms of aesthetics, natural vegetation surrounding the quarry will be retained (such as in a buffer area i.e., 7.5 m safety barrier and other safety provided) so as to help minimise dust emissions.
- Proper fencing will be carried out at the conceptual stage, Security will be posted round the clock, to prevent inherent entry of the public and cattle.

4.1.3 Soil Environment

4.1.4 Impact on Soil Environment

The top layer of the project site in the form of topsoil formation, it will be directly loaded into tippers for the filling and levelling of low-lying areas. There is no disposal of topsoil. The excavated Rough Stone quarry will be directly loaded into dumpers to the needy customers.

There will be no disposal of waste water from the quarry operation, No discharge of toxic effluent from the proposed projects. The dust emission at working face and haul roads will be controlled by water sprinkling and plantation.

Erosion and Sedimentation (Removal of protective vegetation cover; Exposure of underlying soil horizons that may be less pervious, or more erodible than the surface layers; Reduced capacity of soils to absorb rainfall; Increased energy in storm-water runoff due to concentration and velocity; and Exposure of subsurface materials which are unsuitable for vegetation establishment).

4.1.5 Common Mitigation Measures for Respective Individual Proposed Projects

- Run-off diversion – Garland drains will be constructed all around the project boundary to prevent surface flows from entering the quarry works areas. And will be discharged into vegetated natural drainage lines, or as distributed flow across an area stabilised against erosion.
- Sedimentation ponds - Run-off from working areas will be routed towards sedimentation ponds. These trap sediment and reduce suspended sediment loads before runoff is discharged from the quarry site. Sedimentation ponds should be designed based on runoff, retention times, and soil characteristics. There may be a need to provide a series of sedimentation ponds to achieve the desired outcome.
- Retain vegetation – Retain existing or re-plant the vegetation at the site wherever possible.
- Monitoring and maintenance – Weekly monitoring and daily maintenance of erosion control systems so that they perform as specified specially during rainy season.

4.1.6 Waste Dump Management

There are no wastages anticipated in this Rough Stone quarrying operation. The entire quarried out materials will be utilized (100%).

4.2 Water Environment

4.2.1 Anticipated Impact on Surface and ground water

The impact due to quarrying on the water quality is expected to be insignificant because of no use of chemicals or hazardous substances during quarrying process. The quarrying activity will not intersect ground water table as the maximum depth of the quarry in the cluster is 45m Agl and water table is found at a depth of 76-82m BGL. The quarrying operation will be carried out well above the water table. There is no intersection of surface water bodies (Streams, Canal, Odai etc.,) in the project area. During rainy season rain water will be collected in the quarry pit and later used for greenbelt development and for the water sprinkling in the haul roads. There is no proposal for discharging of quarry pit water outside the project area.

TABLE 4.1: WATER REQUIREMENTS

PROPOSAL – P1		
*Purpose	Quantity	Source
Dust Suppression	1.0KLD	From Existing bore wells from nearby area
Green Belt development	0.5KLD	From Existing bore wells from nearby area
Drinking and Domestic purpose	1.0KLD	From existing, bore wells and drinking water will be sourced from Approved water vendors.
Total	2.5 KLD	
PROPOSAL – P2		
*Purpose	Quantity	Source
Dust Suppression	1.0KLD	From Existing bore wells from nearby area
Green Belt development	0.5KLD	From Existing bore wells from nearby area
Drinking and Domestic purpose	1.0KLD	From existing, bore wells and drinking water will be sourced from Approved water vendors.
Total	2.5 KLD	
PROPOSAL – P3		
*Purpose	Quantity	Source
Dust Suppression	0.9KLD	The required water will be met from rainwater accumulated in mine pit (when available) and from the approved water vendors.
Green Belt development	0.8KLD	The required water will be met from rainwater accumulated in mine pit (when available) and from the approved water vendors.
Sanitation and Drinking purpose	0.6KLD	Approved water vendors.
Total	2.3 KLD	

* Water for drinking purpose will be brought from approved water vendors

Source: Approved Mining Plan Pre-Feasibility Report

Total water requirement in the cluster quarries is about 7.3KLD, the water for dust suppression and greenbelt development will be sourced from the mine pit water collected during rainy seasons, the water for domestic purpose and drinking will be sourced from the approved water vendors.

4.2.2 Common Mitigation measures:

- Garland drain, settling tank will be constructed along the proposed mining lease area. The Garland drain will be connected to settling tank and sediments will be trapped in the settling traps and only clear water will be discharged out to the natural drainage

- Rainwater will be collected in sump in the mining pits and will be allowed to store and pumped out to surface setting tank of 15 m x 10m x 3m to remove suspended solids if any. This collected water will be judiciously used for dust suppression and such sites where dust likely to be generated and for developing green belt. The proponent will collect and judiciously utilize the rainwater as part of rainwater harvesting system.
- Providing benches with inner slopes and through a system of drains and channels, allowing rain water to descent into surrounding drains, so as to minimize the effects of erosion & water logging arising out of uncontrolled descent of water.
- Reuse the water collected during storm for dust suppression and greenbelt development within the mines
- Installing interceptor traps/oil separators to remove oils and greases. Water from the tipper wash-down facility and machinery maintenance yard will pass through interceptor traps/oil separators prior to its reuse;
- Using flocculating or coagulating agents to assist in the settling of suspended solids during monsoon seasons;
- Periodic (every 6 month once) analysis of quarry pit water and ground water quality in nearby villages.
- Domestic sewage from site office & urinals/latrines provided in ML is discharged in septic tank followed by soak pits.
- Waste water discharge from mine will be treated in settling tanks before using for dust suppression and tree plantation purposes.
- De-silting will be carried out before and immediately after the monsoon season.
- Regular monitoring (every 6 month once) and analysing the quality of water in open well, bore wells and surface water.

4.3 Air Environment

The air borne particulate matter is the main air pollutant in this opencast mining. The mining operation will be carried out by jackhammer drilling (35mm dia) and Hydraulic Excavators will be utilized for excavation of Rough Stone quarry waste.

4.3.1. Anticipated

Impact

- During mining, at various stages activities such as excavation, drilling, blasting, and transportation of materials, particular matter (PM), gases such as Sulphur dioxide, oxides of Nitrogen from vehicular exhaust are the main air pollutants.
- Emissions of noxious gases due to incomplete detonation of explosive may sometimes pollute the air.
- The fugitive dust released from the mining operations may cause effect on the mine workers who are directly exposed to the fugitive dust.
- Simultaneously, the air-borne dust may travel to longer distances and settle in the villages located near the mine lease area.

4.3.1.1. Modelling of Incremental Concentration from all Proposed Projects

Wind erosion of the exposed areas and the air borne particulate matter generated by quarrying operation, and transportation are mainly PM₁₀ & PM_{2.5} and emissions of Sulphur dioxide (SO₂) & Oxides of Nitrogen (NO_x) due to excavation/loading equipment and vehicles plying on haul roads are the cause of air pollution in the project area.

Similarly, loading - unloading and transportation of Rough Stone quarry, wind erosion of the exposed area and movement of light vehicles causes of pollution. This leads to an impact on the ambient air environment around the project area.

Anticipated incremental concentration due to this quarrying activity and net increase in emissions due to quarrying activities within 500 meters around the project area is predicted by Open Pit Source modelling using AERMOD Software.

The impact on Air Environment is due to the mining and allied activities during Land Development phase, Mining process and Transportation. The emissions of Sulphur dioxide (SO₂), Oxides of Nitrogen (NO_x) due to excavation/loading equipment and vehicles plying on haul roads are marginal. Loading - unloading and transportation of Rough Stone quarry, wind erosion of the exposed area and movement of light vehicles will be the main polluting source in the mining activities releasing Particulate Matter (PM₁₀) affecting Ambient Air of the area. Prediction of impacts on air environment has been carried out taking into consideration cumulative production three proposed quarries. Air environment and net increase in emissions by Open pit source modelling in AERMOD Software.

4.3.1.2 Emission Estimation

An emissions factor is a representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant.

The general equation for emissions estimation is:

$$E = A \times EF \times (1-ER/100)$$

Where:

E = emissions;

A = activity rate;

EF = emission factor, and

ER =overall emission reduction efficiency, %

The proposed mining activity includes various activities like ground preparation, excavation, handling and transport of ore. These activities have been analysed systematically basing on USEPA-Emission Estimation Technique Manual, for Mining AP-42, to arrive at possible emissions to the atmosphere and estimated emissions are given in Table 4-2.

TABLE 4.2: ESTIMATED EMISSION RATE

EMISSION ESTIMATION FOR QUARRY "P1"				
	Activity	Source type	Value	Unit
Estimated Emission Rate for PM ₁₀	Drilling	Point Source	0.110788800	g/s
	Blasting	Point Source	0.004037325	g/s
	Mineral Loading	Point Source	0.045457385	g/s
	Haul Road	Line Source	0.002501864	g/s/m
	Overall Mine	Area Source	0.071475689	g/s

Estimated Emission Rate for SO ₂	Overall Mine	Area Source	0.001433588	g/s
Estimated Emission Rate for NO _x	Overall Mine	Area Source	0.000124856	g/s
EMISSION ESTIMATION FOR QUARRY “P2”				
Estimated Emission Rate for PM ₁₀	Activity	Source type	Value	Unit
	Drilling	Point Source	0.134171398	g/s
	Blasting	Point Source	0.010517540	g/s
	Mineral Loading	Point Source	0.048827315	g/s
	Haul Road	Line Source	0.002522445	g/s/m
	Overall Mine	Area Source	0.076799911	g/s
Estimated Emission Rate for SO ₂	Overall Mine	Area Source	0.002751769	g/s
Estimated Emission Rate for NO _x	Overall Mine	Area Source	0.000251510	g/s

4.3.2 Frame work of Computation & Model details

The prediction included the impact of Excavation, Drilling, Blasting, loading and movement of vehicles during transportation and meteorological parameters such as wind speed, wind direction, temperature, rainfall, humidity and Cloud cover.

Impact was predicted over the distance of 10 km around the source to assess the impact at each receptor separately at the various locations and maximum incremental GLC value at the project site. Maximum impact of PM₁₀ was observed close to the source due to low to moderate wind speeds. Incremental value of PM₁₀ was superimposed on the base line data monitored at the proposed site to predict total GLC of PM₁₀ due to combined impacts.

Air Pollution Dispersion Modelling

Baseline Air Quality –

Baseline air quality has been measured at 2 locations in the cluster and 5 locations within the buffer zone of the study area. The 24 - hourly average samples of particulate matters (PM₁₀ and PM_{2.5}), SO₂ and NO_x were measured following the National Ambient Air Quality Standards (NAAQS), 2009. Monitoring data of 7 sampling stations are given below –

Meteorological Data –

Meteorology is the key to understand the air quality. The essential relationship between meteorological condition and atmospheric dispersion involves the wind in the broadest sense. Wind fluctuations over a very wide range of time, accomplish dispersion and strongly influence other processes associated with them.

A temporary meteorological station was installed at project site and monitored continually for study period without break. The station was installed at a height of 4 m above the ground level in such a way that there are no obstructions facilitating flow of wind, wind speed, wind direction, humidity and temperature are recorded on hourly basis. A weather data was collected from IMD, Krishnagiri agro for the month of Oct2023 – Dec2023 to correlate with site data and found not much of change in the parameters.

FIGURE 4.1: AERMOD TERRAIN MAP

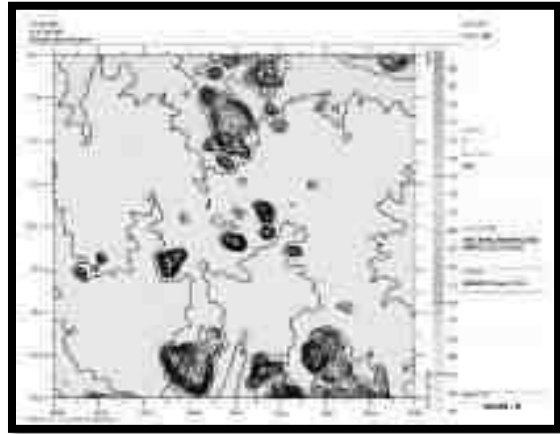
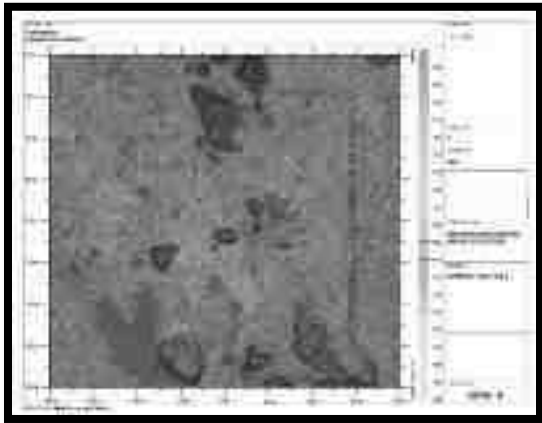


FIGURE 4.2: PREDICTED INCREMENTAL CONCENTRATION OF PM₁₀

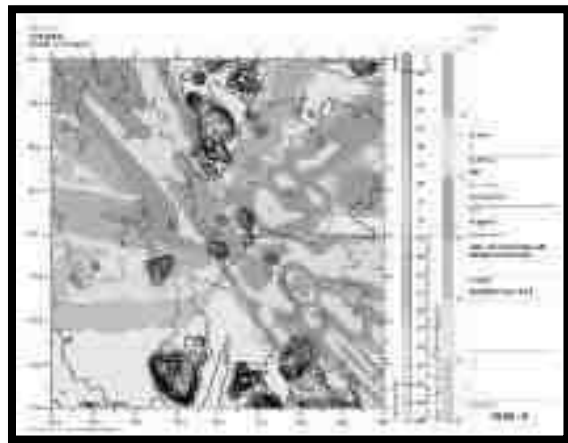
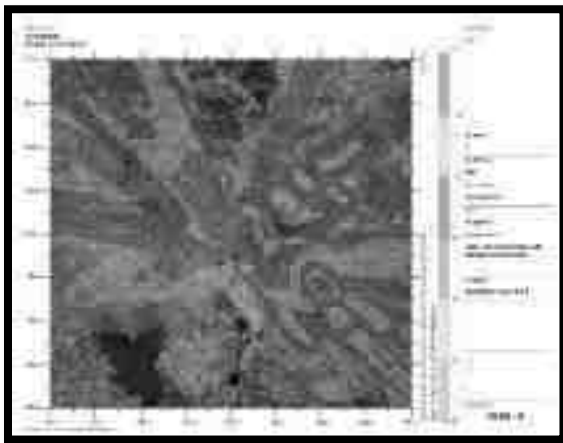


FIGURE 4.3: PREDICTED INCREMENTAL CONCENTRATION OF PM₂₅

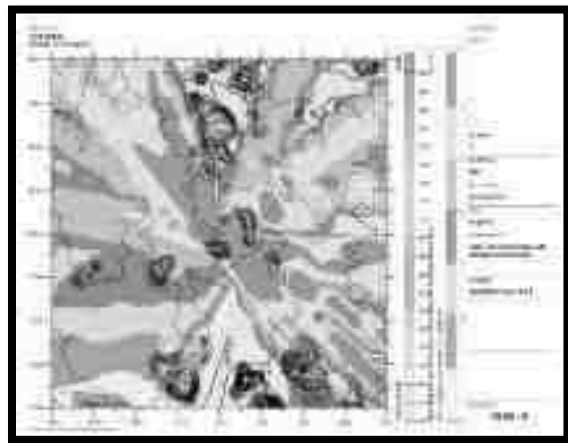
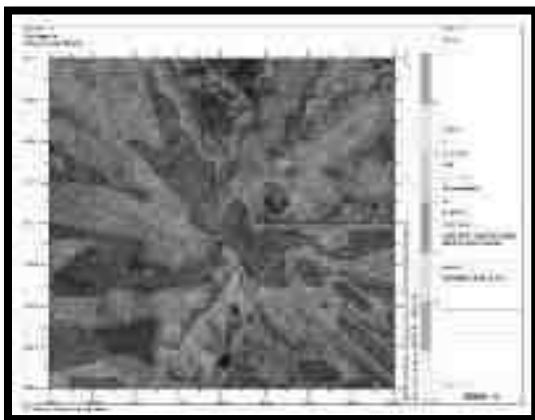


FIGURE 4.4: PREDICTED INCREMENTAL CONCENTRATION OF SO₂

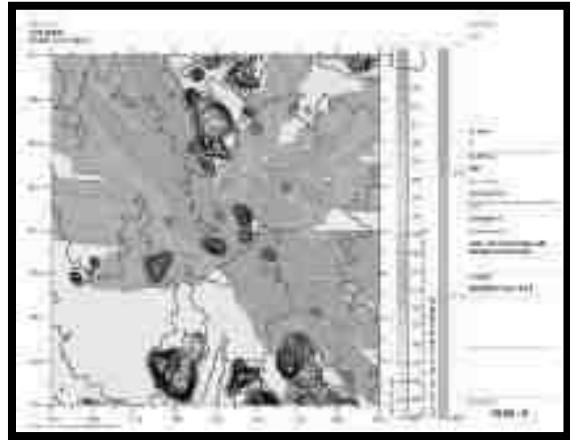
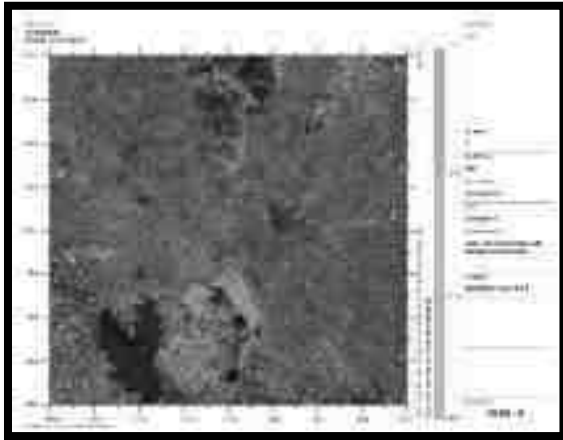


FIGURE 4.5: PREDICTED INCREMENTAL CONCENTRATION OF NO_x

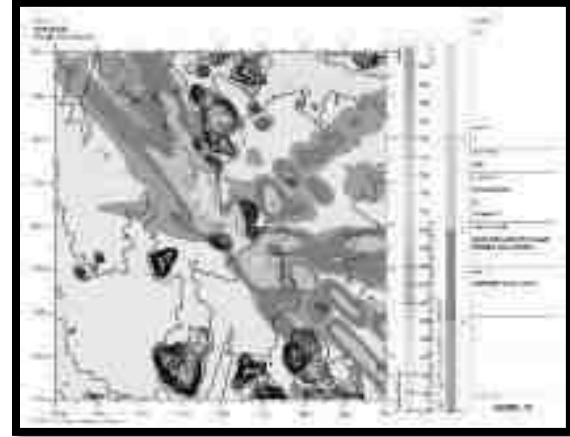
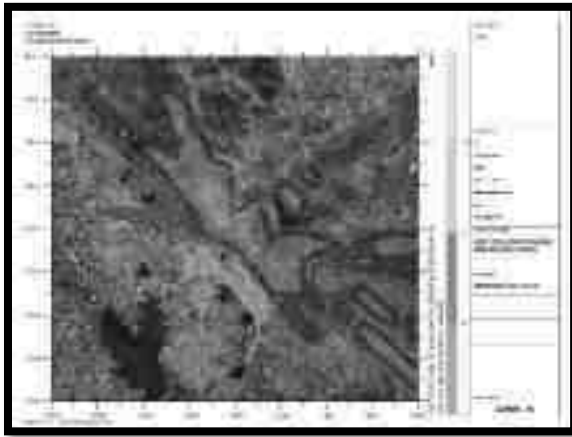
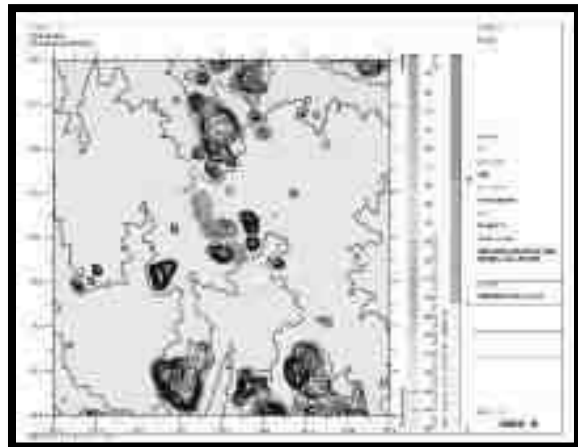
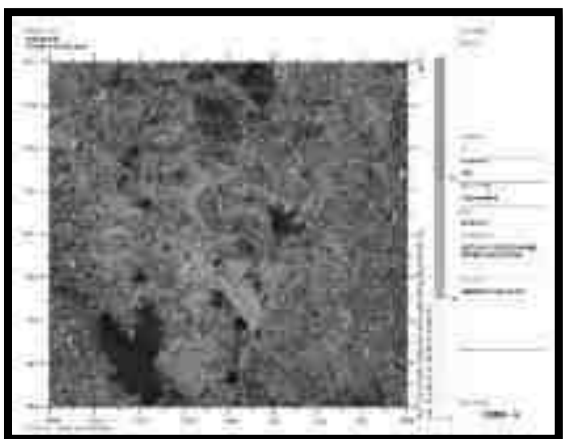


FIGURE 4.6: PREDICTED INCREMENTAL CONCENTRATION OF FUGITIVE DUST



4.3.2.1 Model Results

The post project Resultant Concentrations of PM10, PM2.5, SO2& NOX (GLC) is given in Table below:

TABLE 4.3: INCREMENTAL & RESULTANT GLC OF PM₁₀

Station Code	Location	X Coordinate (m)	Y Coordinate (m)	Average Baseline PM ₁₀ (µg/m ³)	Incremental value of PM ₁₀ due to mining (µg/m ³)	Total PM ₁₀ (µg/m ³) (5+6)
AAQ1	12°32'41.10"N 78°12'49.36"E	2	-40	40.8	16.83	57.6
AAQ2	12°32'49.86"N 78°12'45.83"E	-106	236	41.7	16.31	58.0
AAQ3	12°33'15.67"N 78°12'50.38"E	36	1029	42.8	8	50.8
AAQ4	12°34'53.26"N 78°10'10.90"E	-4830	4060	43.1	14.22	57.4
AAQ5	12°31'11.06"N 78°14'48.75"E	3647	-2839	41.4	11	52.4
AAQ6	12°35'52.76"N 78°15'30.55"E	4920	5911	41.4	0	41.4
AAQ7	12°31'16.87"N 78°11'2.16"E	-3267	-2662	42.9	5.1	48.0

TABLE 4.4: INCREMENTAL & RESULTANT GLC OF PM_{2.5}

Station Code	Location	X Coordinate (m)	Y Coordinate (m)	Average Baseline PM _{2.5} (µg/m ³)	Incremental value of PM _{2.5} due to mining (µg/m ³)	Total PM _{2.5} (µg/m ³) (5+6)
AAQ1	12°32'41.10"N 78°12'49.36"E	2	-40	18.9	9.77	28.7
AAQ2	12°32'49.86"N 78°12'45.83"E	-106	236	21.6	9.23	30.9
AAQ3	12°33'15.67"N 78°12'50.38"E	36	1029	21.2	6	27.2
AAQ4	12°34'53.26"N 78°10'10.90"E	-4830	4060	21.1	8.3	29.4
AAQ5	12°31'11.06"N 78°14'48.75"E	3647	-2839	41.4	7.5	48.9
AAQ6	12°35'52.76"N 78°15'30.55"E	4920	5911	43.0	0	43.0
AAQ7	12°31'16.87"N 78°11'2.16"E	-3267	-2662	19.3	4	23.3

TABLE 4.5: INCREMENTAL & RESULTANT GLC OF SO₂

Station Code	Location	X Coordinate (m)	Y Coordinate (m)	Average Baseline So ₂ (µg/m ³)	Incremental value of So ₂ due to mining (µg/m ³)	Total So ₂ (µg/m ³) (5+6)
AAQ1	12°32'41.10"N 78°12'49.36"E	2	-40	6.2	2.39	8.6
AAQ2	12°32'49.86"N 78°12'45.83"E	-106	236	6.1	2.35	8.5
AAQ3	12°33'15.67"N 78°12'50.38"E	36	1029	7.8	2	9.8
AAQ4	12°34'53.26"N 78°10'10.90"E	-4830	4060	7.5	2.3	9.8
AAQ5	12°31'11.06"N 78°14'48.75"E	3647	-2839	6.9	1.5	8.4
AAQ6	12°35'52.76"N 78°15'30.55"E	4920	5911	5.9	0	5.9
AAQ7	12°31'16.87"N 78°11'2.16"E	-3267	-2662	6.0	0.35	6.3

TABLE 4.6: INCREMENTAL & RESULTANT GLC OF NO_x

Station Code	Location	X Coordinate (m)	Y Coordinate (m)	Average Baseline No _x (µg/m ³)	Incremental value of No _x due to mining (µg/m ³)	Total No _x (µg/m ³) (5+6)
AAQ1	12°32'41.10"N 78°12'49.36"E	2	-40	20.6	12.68	33.3
AAQ2	12°32'49.86"N 78°12'45.83"E	-106	236	21.4	12.29	33.7
AAQ3	12°33'15.67"N 78°12'50.38"E	36	1029	21.2	0	21.2
AAQ4	12°34'53.26"N 78°10'10.90"E	-4830	4060	21.5	5.6	27.1

AAQ5	12°31'11.06"N 78°14'48.75"E	3647	-2839	21.2	2	23.2
AAQ6	12°35'52.76"N 78°15'30.55"E	4920	5911	21.4	0	21.4
AAQ7	12°31'16.87"N 78°11'2.16"E	-3267	-2662	21.2	0	21.2

TABLE 4.7: INCREMENTAL & RESULTANT GLC OF FUGITIVE DUST

Station Code	Location	X Coordinate (m)	Y Coordinate (m)	Average Baseline Fugitive ($\mu\text{g}/\text{m}^3$)	Incremental value of Fugitive due to mining ($\mu\text{g}/\text{m}^3$)	Total Fugitive ($\mu\text{g}/\text{m}^3$) (5+6)
AAQ1	12°32'41.10"N 78°12'49.36"E	2	-40	61.18	28.7	89.9
AAQ2	12°32'49.86"N 78°12'45.83"E	-106	236	62.70	28	90.7
AAQ3	12°33'15.67"N 78°12'50.38"E	36	1029	65.94	0	65.9
AAQ4	12°34'53.26"N 78°10'10.90"E	-4830	4060	65.33	0	65.3
AAQ5	12°31'11.06"N 78°14'48.75"E	3647	-2839	63.47	0	63.5
AAQ6	12°35'52.76"N 78°15'30.55"E	4920	5911	63.64	0	63.6
AAQ7	12°31'16.87"N 78°11'2.16"E	-3267	-2662	63.42	0	63.4

From the resultant of cumulative concentration i.e., Background + Incremental Concentration of pollutant in all the receptor locations without effective mitigation measures are still within the prescribed NAAQ limits of 100, 80 & 80 $\mu\text{g}/\text{m}^3$ for PM10, SO2 & NOX respectively. By adopting suitable mitigation measures, the pollutant levels in the atmosphere can be further being controlled.

4.3.4. Common Mitigation Measures for Respective Individual Proposed Projects

Drilling – To control dust at source, wet drilling will be practiced. Where there is a scarcity of water, suitably designed dust extractor will be provided for dry drilling along with dust hood at the mouth of the drill-hole collar.

Advantages of Wet Drilling: -

- In this system dust gets suppressed close to its formation. Dust suppression become very effective and the work environment will be improved from the point of occupational comfort and health.
- Due to dust free atmosphere, the life of engine, compressor etc., will be increased.
- The life of drill bit will be increased.
- The rate of penetration of drill will be increased.
- Due to the dust free atmosphere visibility will be improved resulting in safer working conditions.

Blasting –

- Establish time of blasting to suit the local conditions and water sprinkling on blasting face
- Avoid blasting i.e., when temperature inversion is likely to occur and strong wind blows towards residential areas
- Controlled blasting includes Adoption of suitable explosive charge and short delay detonators, adequate stemming of holes at collar zone and restricting blasting to a particular time of the day i.e., at the time lunch hours, controlled charge per hole as well as charge per round of hole
- Before loading of material water will be sprayed on blasted material
- Dust mask will be provided to the workers and their use will be strictly monitored

Haul Road & Transportation –

- Water will be sprinkled on haul roads twice a day to avoid dust generation during transportation
- Transportation of material will be carried out during day time and material will be covered with tarpaulin
- The speed of tippers plying on the haul road will be limited below 20 km/hr to avoid generation of dust.
- Water sprinkling on haul roads & loading points will be carried out twice a day
- Main source of gaseous pollution will be from vehicle used for transportation of mineral; therefore, weekly maintenance of machines improves combustion process & makes reduction in the pollution.
- The un-metalled haul roads will be compacted weekly before being put into use.
- Over loading of tippers will be avoided to prevent spillage.
- It will be ensured that all transportation vehicles carry a valid PUC certificate
- Grading of haul roads and service roads to clear accumulation of loose materials

Green Belt –

- Planting of trees all along main mine haul roads and regular grading of haul roads will be practiced to prevent the generation of dust due to movement of dumpers/trucks
- Green belt of adequate width will be developed around the project areas

Occupational Health –

- Dust mask will be provided to the workers and their use will be strictly monitored
- Annual medical checkups, trainings and campaigns will be arranged to ensure awareness about importance of wearing dust masks among all mine workers & tipper drivers
- Ambient Air Quality Monitoring will be conducted six months once to assess effectiveness of mitigation measures proposed

4.4 Noise Environment (Impact & Mitigation Measures)

Noise pollution is mainly due to operation like drilling & blasting and plying of trucks & HEMM. These activities will not cause any problem to the inhabitants of this area because there is no human settlement in close proximity to the project area. Noise modelling has been carried out considering blasting and compressor operation (drilling) and transportation activities.

Predictions have been carried out to compute the noise level at various distances around the working pit due to these major noise-generating sources. Noise modelling has been carried out to assess the impact on surrounding ambient noise levels. Basic phenomenon of the model is the geometric attenuation of sound. Noise at a point generates spherical waves, which are propagated outwards from the source through the air at a speed of 1,100 ft/sec, with the first wave making an ever-increasing sphere with time. As the wave spreads the intensity of noise diminishes as the fixed amount of energy is spread over an increasing surface area of the sphere. The assumption of the model is based on point source relationship i.e., for every doubling of the distance the noise levels are decreased by 6 dB (A).

For hemispherical sound wave propagation through homogeneous loss free medium, one can estimate noise levels at various locations at different sources using model based on first principle.

$$Lp_2 = Lp_1 - 20 \log (r_2/r_1) - Ae_{1,2}$$

Where:

L_{p1} & L_{p2} are sound levels at points located at distances r_1 & r_2 from the source.

$A_{e1,2}$ is the excess attenuation due to environmental conditions. Combined effect of all sources can be determined at various locations by logarithmic addition.

$$L_{p\text{total}} = 10 \log \{10^{(L_{p1}/10)} + 10^{(L_{p2}/10)} + 10^{(L_{p3}/10)} + \dots\}$$

4.4.1 Anticipated Impact

Attenuation due to Green Belt has been taken to be 4.9 dB (A). The inputs required for the model are:

- Source data
- Receptor data
- Attenuation factor

Source data has been computed taking into account of all the machinery and activities used in the mining process. Same has been listed in Table 4-8.

TABLE 4.8: ACTIVITY AND NOISE LEVEL PRODUCED BY MACHINERY

Sl.No.	Machinery / Activity	Impact on Environment?	Noise Produced in dB(A) at 50 ft from source*
1	Blasting	Yes	94
2	Jack Hammer	Yes	88
3	Compressor	No	81
4	Excavator	No	85
5	Tipper	No	84
Total Noise Produced			95.8

*50 feet from source = 15.24 meters

Source: U.S. Department of Transportation (Federal Highway Administration) – Construction Noise Handbook

The total noise to be produced by mining activity is calculated to be 95.8 dB (A). Generally, most mining operations produce noise between 100-109 dB (A). We have considered equipment and operation noise levels (max) to be approx. 109 dB (A) for noise prediction modelling.

TABLE 4.9: PREDICTED NOISE INCREMENTAL VALUES

Location ID	N1	N2	N3	N4	N5	N6	N7
Maximum Monitored Value (Day) dB(A)	48.5	48.5	46.8	45.7	45.7	42.9	42.5
Incremental Value dB(A)	60.1	56.6	41.0	24.8	27.0	22.6	28.1
Total Predicted Noise level dB(A)	60.4	57.2	47.8	45.7	45.8	42.9	42.7
NAAQ Standards	Industrial		Day Time- 75 dB (A)		Night Time- 70 dB (A)		
	Residential		Day Time- 55 dB (A)		Night Time- 45 dB (A)		

4.4.2 Common Mitigation Measures for Respective Individual Proposed Projects

The following noise mitigation measures are proposed for control of Noise.

- Time intervals for each quarry during blasting.
- Use of personal protective devices i.e., earmuffs and earplugs by workers, who are working in high noise generating areas.
- Limiting time exposure of workers to excessive noise.

- Proper and regular maintenance of vehicles, machinery and other equipment's.
- The noise generated by the machinery will be reduced by proper lubrication of the machinery and other equipment's.
- Speed of trucks entering or leaving the quarry will be limited to moderate speed to prevent undue noise from empty vehicles...
- Noise levels will be controlled by using optimum explosive charge, proper delay detonators and proper stemming to prevent blow out of holes (occasionally).
- Providing proper noise proof enclosure for the workers separated from the noise source and noise prone equipment.
- Provision of Quiet areas, where employees can get relief from workplace noise.
- The development of green belts around the periphery of the quarry site to attenuate noise.
- Regular medical check-up and proper training to personnel to create awareness about adverse noise level effects.

4.4.3 Ground Vibrations

Ground vibrations due to the proposed mining activities are anticipated due to operation of Mining Machines like Excavators, drilling and blasting, transportation vehicles, etc., However, the major source of ground vibration from the quarry is blasting. The major impact of the ground vibrations is observed on the domestic houses located in the villages nearby the mine lease area. The kuchha houses are more prone to cracks and damage due to the vibrations induced by blasting whereas RCC framed structures can withstand more ground vibrations. Apart from this, the ground vibrations may develop a fear factor in the nearby settlements.

Another impact due to blasting activities is fly rocks. These may fall on the houses or agricultural fields nearby the mining lease area and may cause injury to persons or damage to the structures. Nearest habitation from the project area is located 550m North in Gulisandiram village. The ground vibrations due to the blasting in proposed mine are calculated using the empirical equation.

The empirical equation for assessment of peak particle velocity (PPV) is:

$$V = K [R/Q^{0.5}]^{-B}$$

Where –

V = peak particle velocity (mm/s)

K = site and rock factor constant

Q = maximum instantaneous charge (kg)

B = constant related to the rock and site (usually 1.6)

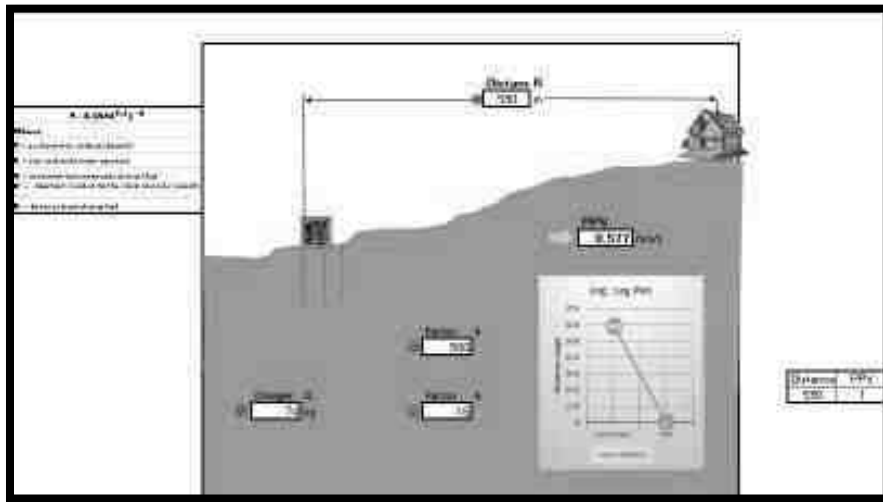
R = distance from charge (m)

TABLE 4.10: PREDICTED PPV VALUES DUE TO BLASTING

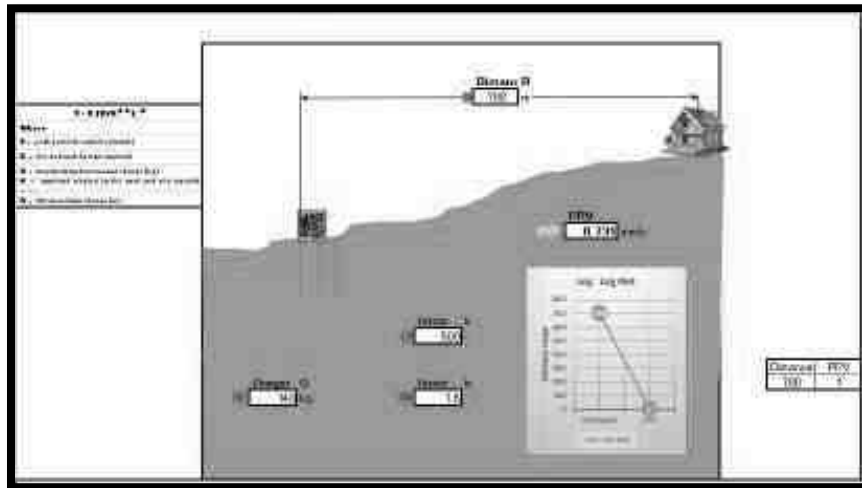
Location ID	Maximum Charge in kgs	Nearest Habitation in m	PPV in m/ms
P1	74	590	0.577
P2	140	700	0.731

P3	139	210	4.987
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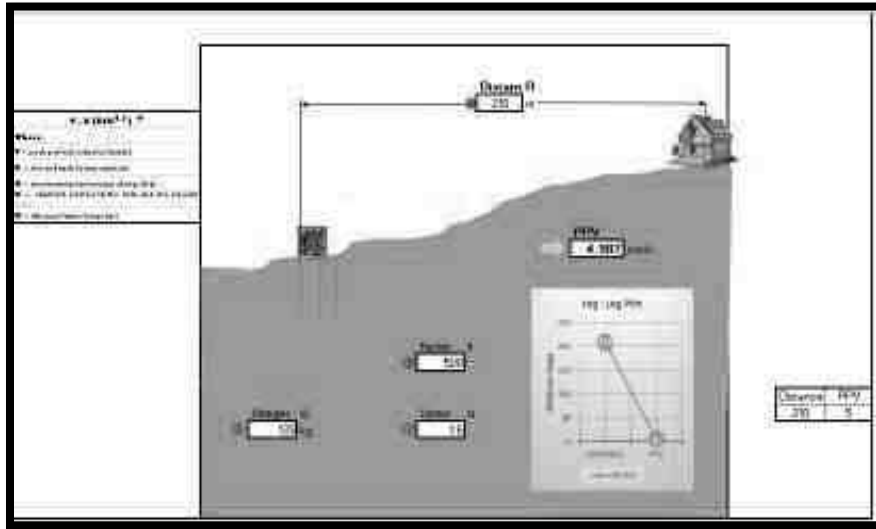
P1



P2



P3



From the above, the charge per blast of 140Kg is well below the Peak Particle Velocity of 8 mm/s as per Directorate General of Mines Safety for safe level criteria through Circular No. 7 dated 29/8/1997. It should be ensured that the explosives used for blasting at one blast should not exceed more than 28 Kg at any point of time. However, as per statutory requirement control measures will be adopted to avoid the impacts due to ground vibrations and fly rocks due to blasting.

4.4.3.1 Common Mitigation Measures for Respective Individual Proposed Projects

- The blasting operations in the cluster quarries are carried out without deep hole drilling and blasting using delay detonators, which reduces the ground vibrations;
- Proper quantity of explosive, suitable stemming materials and appropriate delay system will be adopted to avoid overcharging and for safe blasting;
- Adequate safe distance from blasting will be maintained as per DGMS guidelines;
- Blasting shelter will be provided as per DGMS guidelines;
- Blasting operations will be carried out only during day time;
- The charge per delay will be minimized and preferably a greater number of delays will be used per blasts;
- During blasting, other activities in the immediate vicinity will be temporarily stopped;
- Drilling parameters like depth, diameter and spacing will be properly designed to give proper blast;
- A fully trained explosives blast man (Mining Mate, Mines Foreman, 2nd Class Mines Manager/ 1st Class Mines Manager) will be appointed.
- A set of shot firing rules will be drawn up and blasting shall commence outlining the detailed operating procedures that will be followed to ensure that shot firing operations on site take place without endangering the workforce or public.
- Sufficient angular stemming material will be used to confine the explosive force and minimise environmental disturbance caused by venting / misfire.

- The detonators will be connected in a predetermined sequence to ensure that only one charge is detonated at any one time and a NONEL or similar type initiation system will be used.
- The detonation delay sequence shall be designed so as to ensure that firing of the holes is in the direction of free faces so as to minimise vibration effects.
- Appropriate blasting techniques shall be adopted such that the predicted peak particle velocity shall not exceed 8 Hz.
- Vibration monitoring will be carried out every 6 months to check the efficacy of blasting practices.

4.5 Impact on the Biological Environment

4.5.1. Impact Identification and Evaluation

In general, impact prediction methods argue that the foremost step in impact appraisal must consider and identify project actions that are likely to bring significant changes in the project environment. The present study determined to predict the likely impacts of the Proposed Rough stone quarry mining Project in the surrounding environment with a specific focus on biological attributes covering habitats/ecosystems and associated biodiversity. Likely impacts identified were categorized into different levels like direct or primary and indirect or secondary impacts based on the influence of sources of impacts.

4.5.2. Impact on Flora

The proposed mine lease area is slightly elevated topography and it is not fit for cultivation. It is mostly devoid of any considerable vegetation. The proposed mine lease area (core zone) does not encompass any designated forest land within it. The vegetation is very sparse and scanty. So, there will be no impact on flora from the mining operation. There will not be much contamination of soil or any other materials from the mining operation. No threatened plant species were reported in the core and buffer study area during the field survey.

4.5.2.1. Anticipated Impact on agricultural land associated with flora

1. There are no impacts on the nearby agricultural land due to this mining activity.
2. None of the plants will be cut during the operational phase of the mine.
3. There shall be negligible air emissions or effluents from the project site. During the loading of the truck, dust generation will be likely. This shall be a temporary effect and not anticipated to affect the surrounding vegetation significantly.

4.5.3 Mitigation Measures

4.5.3.1. General Guidelines for Green Belt Development

Drone survey was covered the green belt and fencing as per the terms of references. The green belt and plantation purposes in and around the proposed mine lease area native species, fruit-bearing trees, medicinal plants, and dense canopy trees should be selected. These species should be tolerant to pollution levels as per Bio- Geography zones of India.

After the operation of mining production capacity, green belt and Plantation species should be in accordance with the Terms and Conditions of the Environmental Clearance Green belt is created not only for the purpose of protecting sensitive areas or maintaining the ecological balance but because they also act as efficient biological filters or sinks for particulate and gaseous emissions, generated by vehicular movements and various industrial and mining

activities. Optimally designed green belts can be effective in reducing the impact of fugitive emissions and pollutants accidentally or otherwise released at ground levels.

4.5.3.2. Proposed Green Belt

Extensive green belt development will be started during the construction phase, which will continue till the operation of the plant. About 1500-2000 trees will be planted per hectare all around the plant, approach roads, and township premises. Locally available types of trees that are resistant to pollutants will be planted. In addition to the above, all open spaces available within the premises will be developed as nurseries, parks, gardens, and other forms of greenery. 5 m wide greenbelt will be developed along the plant premises, as per land available.

4.5.3.3. Guidelines & Techniques for Green Belt Development

An extensive survey of the project area was undertaken to observe the structure and composition of vegetation. Hence a combination of plants is selected depending upon the topographical suitability and species selected as per the SPCB Guideline and ToR. The soil characteristics were kept in mind. Based on this survey and environmental conditions suitable native plant species have been proposed for the green belt development plan.

4.5.3.4. Development of Green Belt

The plantation matrix adopted for the green belt development includes pit of 0.3 m x 0.3 m in size with a spacing of 2 m x 2 m. In addition, earth filling and manure may also be required for the proper nutritional balance and nourishment of the sapling. It is also recommended that the plantation has to be taken up randomly and the landscaping aspects could be taken into consideration. Multi-layered plantations comprising of medium height trees (7 m to 10 m) and shrubs (5 m height) are proposed for the green belt.

A greenbelt is a set of rows of trees planted in such a fashion, to create an effective barrier between the project and its surroundings. The greenbelt helps to capture fugitive emissions, attenuate the noise levels in the existing project, and simultaneously improve aesthetics of the surroundings.

4.5.3.5. Design of Green Belt

The present plan comprises the details of field investigations. Plant species for greenbelt development are selected as per CPCB guidelines. The green belt will be developed along the periphery of the Proposed Rough stone quarry. The greenbelt development plan has been formulated considering the parameters such as climate, soil types, topography, etc.

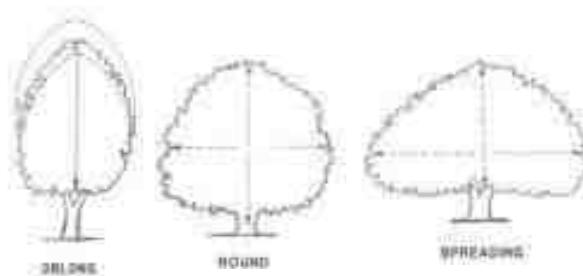
a. Characteristic features of plants to be used for Absorption of pollutant gases

- Plant species should be perennial and evergreen with thick canopy cover.
- The crown of the tree (mass of foliage/leaves and branches growing outward from the trunk of the tree) should be either Oblong, Round, or Spreading for effective absorption of pollutant gases.
- Plant should have foliage of longer duration.
- The foliage should be freely exposed through: Adequate height of crown, Openness of foliage/leaves in canopy, big leaves (long and broad lamina surfaces).

The purpose of green belt around the project is to capture the fugitive emissions. Carbon sequestration and to attenuate the noise generated. In addition to improving the aesthetics. A wide range of indigenous plant species was

planted as given in the table No 4.1 & 4.2 in consulted with the DFO. The plant species with dense/moderate canopy of native origin was chosen are given below. Species of small/ medium/tall trees alternating with shrubs was planted.

- Plants that grow fast will be preferred.
- Preference for high canopy covers plants with local varieties.
- Perennial and evergreen plants will be preferred.
- The development of the Green Belt is an important aspect for any plant because:
 - a. It improves the ambient air quality by controlling Suspended Particulate Matter (SPM) in the air.
 - b. It helps in noise abatement for the surrounding area.
 - c. It helps in the settlement of new birds and insects within itself.
 - d. It maintains the ecological balance.
 - e. It increases the aesthetic value of the site.



(*Source: Guidance for Developing Green belts Manual, CPCB 2000)

Table No 4.11. List of plant species proposed for Greenbelt development

S. No	Scientific name	Tamil Name
1	<i>Aegle marmelos</i>	Vilva maram
2	<i>Albizia lebbbeck</i>	Vaagai maram
3	<i>Cassia fistula</i>	Konrai tree
4	<i>Lannea coromandelica</i>	Othiyam
5	<i>Limonia acidissima</i>	Vila maram
6	<i>Syzygium cumini</i>	Naval maram
7	<i>Toona ciliata</i>	Santhana Vembu
8	<i>Ficus hispida</i>	Aththi maram
9	<i>Borassus flabellifer</i>	Panai-maram
10	<i>Madhuca longifolia</i>	Illupai maram

(*Source: Term of Reference-ToR)

Table No 4.12. Species suitable for abatement of noise and dust pollution

S. No	Botanical name	Common name
1	<i>Azadirachta indica</i>	Vembhu maram
2	<i>Ficus religiosa</i>	Arasan maram
3	<i>Ficus hispida</i>	Aththi maram
4	<i>Bombax ceiba</i>	Mul Elavu
5	<i>Syzygium cumini</i>	Naval maram
6	<i>Tamarindus indica</i>	Puliyamaram
7	<i>Mangifera indica</i>	Manga maram

8	<i>Harwickia binata</i>	Anjan maram
9	<i>Delonix regia</i>	Neruppu Kondrai
10	<i>Cassia Fistula</i>	Sara Kondrai

(*Source: Guidance for Developing Green belts Manual, CPCB 2000)

The above-suggested list covers species with thick canopy cover, perennial green nature, native origin, and a large leaf area index. The proposed species will help in forming an effective barrier between the mine site area and the surroundings.

These species need to be planted along the periphery of the lease area for absorb fugitive emissions and noise levels which is generated during mining activities. All the open spaces, where tree plantation may not be possible, should be covered with shrubs and grass to prevent erosion of topsoil.

Some of the important aspects to be considered are:

- Planting of trees in each row will be in staggered orientation.
- In the front row, shrubs will be grown.
- Since the trunks of the tall trees are generally devoid of foliage, it will be useful to have shrubs in front of the trees so as to give coverage to this portion.
- The spacing between the trees will be maintained slightly less than the normal spaces, so that the trees may grow vertically and slightly increase the effective height of the green belt.

4.5.4. Anticipated Impact on Fauna

- Since the terrestrial fauna in the study area are distributed away from the mine site, the impacts of project are likely to be much low on terrestrial fauna of the region. The proposed mining lease area is devoid of any significant vegetation, it is not suitable for permanent habitat for any specific wildlife.
- Habitat degradation and disturbance to faunal group due to ground vibration and increase in noise level will be minimize or resolved by modern technologies. So, from above facts it is revealed that there will be no impact on fauna. No threatened fauna species reported in the core and buffer study area.

4.5.4.1. Measures for protection and conservation of wildlife species

- Topsoil has a large number of seeds of native plant species in the mining area.
- Topsoil will be used for restoration and suitable surfaces for planted seedlings.
- Checks and controls the movement of vehicles in and out of the mine.
- Undertaking mitigative measures for a conducive environment to the flora and fauna in consultation with Forest Department.
- A dust suppression system will be installed within the mine and periphery of the mine.
- Plantation around the mine area will help in creating habitats for small faunal species and create a better environment for various fauna. Creating and developing awareness for nature and wildlife in the adjoining villages.

4.5.3. Impact on Aquatic Biodiversity

Mining activities will not disturb the aquatic ecology as there is no effluent discharge proposed from the rough stone quarry. There is no natural perennial surface water body within the mine lease area, like wetlands, rivers streams, lakes, and farmer sites. There are few water bodies located in the study area. Badethala Lake is located about

1.5km on the east and Krishnagiri Dam is located about 5km on the west side, Avathanapatti Lake is located about 6km on the south side. There are a few Odai and Canals located in the study area. There is no impact on fish habitats and the food WEB/ food chain in the water body and Reservoir. Kindly refer the clause no 3.6.3. Aquatic biodiversity is observed in the study area.

4.5.4. Impacts on Bird Fauna:

The project does not involve any tree felling or removal of vegetation. Therefore, there may not be loss of nesting and roosting habitat of avian fauna.

4.5.5. Impacts on wildlife

There is no National Park, Biosphere Reserve, Wildlife corridors, and Tiger/Elephant Reserve found within 10km radius of the project site.

Table No. 4.13. Overall Ecological impact assessments of Kothapetta Village, Rough Stone Quarry, Krishnagiri Taluk, Krishnagiri District and Tamil Nadu.

S.No	Attributes	Assessment
1	Impact of mining activity on agricultural land nearby the proposed project site.	Agricultural land is located away from the proposed project site. There are no impacts on the agricultural land & Horticulture. Kindly refer to the conclusion.
	Activities of the project affect the breeding/nesting sites of birds and animals	No breeding and nesting site was identified in the mining lease site. The fauna sighted mostly migrated from the buffer area.
2	Located near an area populated by rare or endangered species	No Endangered, Critically Endangered, or vulnerable species were sighted in the core mining lease area.
3	Proximity to national park/wildlife sanctuary/reserve forest /mangroves/ coastline/estuary/sea	The nearest Reserve Forest is Peddathalapalli R.F-2.30km-SW.
4	The proposed project restricts access to waterholes for wildlife	'No '
5	Proposed mining project impact surface water quality that also provides water to wildlife	'No 'scheduled or threatened wildlife animals are sighted regularly core in the core area.
6	Proposed mining project increase siltation that would affect nearby biodiversity areas.	Surface runoff management such as drains is constructed properly so there will be no siltation effect in the nearby mining area.
7	Risk of fall/slip or cause death to wild animals due to project activities.	'No'
8	The project release effluents into a water body that also supplies water to a wildlife.	No water body near to core zone so the chances of water becoming polluted is low.
9	Mining projects affect the forest-based livelihood/ any specific forest product on which local livelihood depended.	'No'
10	The project likely to affect migration routes.	'No 'migration route was observed during the monitoring period.
11	The project is likely to affect the flora of an area, which have medicinal value	'No'
12	Forestland is to be diverted, has carbon high sequestration.	'No 'There was no forest land diverted.

13	The project is likely to affect wetlands, Fish breeding grounds, and marine ecology.	'No'. Wetland was not present in the near core Mining lease area. No breeding and nesting ground is present in the core mining area.
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(*Source: EIA Guidance Manual-Mining and Minerals, 2010)

4.6 Socio Economic Impacts

4.6.1 Construction Phase

Anticipated Impacts:

- ♣ No. of people will get employment during the construction stage resulting in the ancillary development and growth. Nearby Local people will be given preference for employment on the basis of their skill and experience.
- ♣ Further due to proposed project, influx of working community will also generate an indirect employment through development of nearby market/ shops, trade centers, activities, transportation etc.
- ♣ Population influx during the construction phase can introduce various water and vector borne diseases which can lead to various unhygienic health problems in the area by disturbing the existing sanitation infrastructure.
- ♣ Rapid diverse population influx at the project site can create unusual behavioural activity such as worker-community conflicts, increase violence such as theft/stabbing and increased consumption of drugs/alcohol within the area.
- ♣ Impacts on the health of nearby villagers can be envisaged due to the transportation activities leading to short term exposure of fugitive dust, resulting in various acute diseases such as increased eye irritation, nausea, headache etc.

Mitigation measures:

- ♣ Deploying of mobile toilets or the construction of temporary toilets will be done near to the construction site with the adequate water supply.
- ♣ Awareness programme will be conducted before the monsoon season regarding the spread of water borne/ vector diseases.
- ♣ Mosquito repellents will be provided in the nearby villages and at construction site to avoid the spread of diseases.
- ♣ To overcome behavioural impact, proper site in charge with timely supervision will be done. In advance, facilities with equipped medical and safety services will be provided to take a control over the incident/violence if any caused.
- ♣ To overcome behavioural impact, supervision will be done by site in charge. In advance, emergency cell will be formed with fully equipped communication system, medical and safety services to take control over the incident/violence caused.

4.6.2 Operation Phase:

Anticipated Impacts:

- ♣ Long term exposure to the pollutants such as PM, SO₂ and NO₂ dust have a potential to create health impacts such as risk of cardiovascular and respiratory disease, eye irritation, bronchitis, lung damage, increased heart ailments, etc.
- ♣ Other impacts, associated with the applied for rough stone quarry project will create a positive impact as it will result in the overall development of the area in respect to the infrastructure development, educational growth, health facilities etc., as a part of the CSR activity.

Mitigation Measures:

♣ In order to mitigate the long-term health impacts, efficient Air Pollution Control Equipment (APCE) like Bag House / Bag Filter / ESP will be installed at all major stacks to keep the emissions within the permissible limits. To reduce the gaseous emission, Pyro-process itself acts as a long SO₂ scrubber and De - NO_x system will be installed for fuel burning along with calciner for low NO_x formation. To reduce fugitive emission from vehicles and machineries will be regularly monitored and maintained.

♣ For emergency, proposed to develop an occupational health centre for its employees and nearby villagers.

4.3 Impact Evaluation:

Table 4.14 Impact Evaluation Impact evaluation is given in table below.

Impact Evaluation Element	Impact on socio economics due to the applied for Kothapetta rough stone quarries over an extent of 12.74.9 ha of Patta land of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu State.			
Potential Effect/ Concern	Proposed project will provide direct & indirect employment opportunities to the local residents, which will help to increase their earning and better living standard as well as further up-liftment of socio-economic status of the area.			
Characteristics of Impacts				
Nature	Positive		Negative	Netural
	✓			
Type	Direct	Indirect	Cumulative	
			✓	
Extent	Project area	Local	Zonal	Regional
		✓		
Duration	Short time		Long term	
			✓	
Intensity	Low		Medium	High
			✓	
Frequency	Remote (R)	Occasional (O)	Periodic (P)	Continuous (C)
			✓	
Significance of Impact				
Significance	Insignificant	Minor	Moderate	Major
			✓	

4.7 Occupational Health and Safety

Occupational health and safety hazards occur during the operational phase of mining and primarily include the following:

- Respiratory hazards

-
- Noise
 - Physical hazards
 - Explosive storage and handling

4.7.1 Respiratory Hazards

Long-term exposure to silica dust may cause silicosis the following measures are proposed:

- Cabins of excavators and tippers will be enclosed with AC and sound proof
- Use of personal dust masks will be made compulsory

4.7.2 Noise

Workers are likely to get exposed to excessive noise levels during mining activities. The following measures are proposed for implementation

- No employee will be exposed to a noise level greater than 85 dB(A) for a duration of more than 8 hours per day without hearing protection
- The use of hearing protection will be enforced actively when the equivalent sound level over 8 hours reaches 85 dB(A), the peak sound levels reach 140 dB(C), or the average maximum sound level reaches 110 dB(A)
- Ear muffs provided will be capable of reducing sound levels at the ear to at least 85 dB(A)
- Periodic medical hearing checks will be performed on workers exposed to high noise levels.

4.7.3 Physical Hazards

The following measures are proposed for control of physical hazards

- Specific personnel training on work-site safety management will be taken up;
- Work site assessment will be done by rock scaling of each surface exposed to workers to prevent accidental rock falling and / or landslide, especially after blasting activities;
- Natural barriers, temporary railing, or specific danger signals will be provided along rock benches or other pit areas where work is performed at heights more than 2m from ground level;
- Maintenance of yards, roads and footpaths, providing sufficient water drainage and preventing slippery surfaces with an all-weather surface, such as coarse gravel will be taken up

4.7.4 Occupational Health Survey

All the persons will undergo pre-employment and periodic medical examination. Employees will be monitored for occupational diseases by conducting the following tests

- General physical tests
- Audiometric tests
- Full chest, X-ray, Lung function tests, Spirometric tests
- Periodic medical examination – yearly
- Lung function test – yearly, those who are exposed to dust
- Eye test

Essential medicines will be provided at the site. The medicines and other test facilities will be provided at free of cost. The first aid box will be made available at the mine for immediate treatment.

First aid training will be imparted to the selected employees regularly. The lists of first aid trained members shall be displayed at strategic places.

4.8 Mine Waste Management

No waste is anticipated from any of the proposed quarries.

4.9 Mine Closure

Mine closure plan is the most important environmental requirement in mining projects. The mine closure plan should cover technical, environmental, social, legal and financial aspects dealing with progressive and post closure activities. The closure operation is a continuous series of activities starting from the decommissioning of the project. Therefore, progressive mine closure plan should be specifically dealt with in the mining plan and is to be reviewed along with mining plan. As progressive mine closure is a continuous series of activities, it is obvious that the proposals of scientific mining have included most of the activities to be included in the closure plan. While formulating the closure objectives for the site, it is important to consider the existing or the pre-mining land use of the site; and how the operation will affect this activity.

The primary aim is to ensure that the following broad objectives along with the abandonment of the mine can be successfully achieved:

- To create a productive and sustainable after-use for the site, acceptable to mine owners, regulatory agencies, and the public
- To protect public health and safety of the surrounding habitation
- To minimize environmental damage
- To conserve valuable attributes and aesthetics
- To overcome adverse socio-economic impacts.

4.9.1 Mine Closure Criteria

The criteria involved in mine closure are discussed below:

4.9.1.1 Physical Stability

All anthropogenic structures, which include mine workings, buildings, rest shelters etc., remaining after mine decommissioning should be physically stable. They should present no hazard to public health and safety as a result of failure or physical deterioration and they should continue to perform the functions for which they were designed. The design periods and factors of safety proposed should take full account of extreme events such as floods, hurricane, winds or earthquakes, etc. and other natural perpetual forces like erosion, etc.,

4.9.1.2 Chemical Stability

The solid wastes on the mine site should be chemically stable. This means that the consequences of chemical changes or conditions leading to leaching of metals, salts or organic compounds should not endanger public health and safety nor result in the deterioration of environmental attributes. If the pollutant discharge likely to cause adverse impacts is predicted in advance, appropriate mitigation measures like settling of suspended solids or passive treatment to improve water quality as well as quantity, etc., could be planned. Monitoring should demonstrate that there is no adverse effect of

pollutant concentrations exceeding the statutory limits for the water, soil and air qualities in the area around the closed mine.

4.9.1.3 Biological Stability

The stability of the surrounding environment is primarily dependent upon the physical and chemical characteristics of the site, whereas the biological stability of the mine site itself is closely related to rehabilitation and final land use. Nevertheless, biological stability can significantly influence physical or chemical stability by stabilizing soil cover, prevention of erosion/wash off, leaching, etc.,

A vegetation cover over the disturbed site is usually one of the main objectives of the rehabilitation programme, as vegetation cover is the best long-term method of stabilizing the site. When the major earthwork components of the rehabilitation programme have been completed, the process of establishing a stable vegetation community begins. For re-vegetation, management of soil nutrient levels is an important consideration. Additions of nutrients are useful under three situations.

- Where the nutrient level of spread topsoil is lower than material in-situ e.g., for development of social forestry
- Where it is intended to grow plants with a higher nutrient requirement than those occurring naturally e.g. planning for agriculture.
- Where it is desirable to get a quick growth response from the native flora during those times when moisture is not a limiting factor e.g., development of green barriers.

The Mine closure plan should be as per the approved mining plan. The mine closure is a part of approved mine plan and activities of closure shall be carried out as per the process described in mine closure plan.

CHAPTER – 5: ANALYSIS OF ALTERNATIVES (TECHNOLOGY AND SITE)

5.0 Introduction:

Consideration of alternatives to a project proposal is a requirement of EIA process. This quarry is site specific. The site has been selected based on geological investigation and exploration from the Proposed quarry around the project site. Drilling, Blasting, Excavation, Loading & Transportation will be carried out in this quarrying operation.

- This area denotes the indicative of flow pattern of the rock mass in N30⁰E to S30⁰W with dipping SE60⁰.
- Transportation facility for materials & manpower.
- Overall impact on environment and mitigation feasibility.
- Socio – economic background.

Enough infrastructure exists and lesser resources are required to be deployed. Since, any major construction for infrastructure is not required and hence does not affect the environment considerably.

5.1 Factors Behind the Selection of Project Site

Rough Stone Quarry Projects at Kothapetta cluster quarries are a site specific. The proposed mining lease area has following advantages: -

- The mineral deposit occurs in a non-forest area.
- There is no habitation within the project area; hence no R & R issues exist.
- There is no river, stream, nallah and water bodies in the applied mine lease area.
- Availability of skilled, semi-skilled and unskilled workers in this region.
- All the basic amenities such as medical, fire fighting, education, transportation, communication and infrastructural facilities are well connected and accessible.
- The mining operations will not intersect the ground water level. Hence, no impact on ground water environment.
- Study area falls in seismic zone – III, there is no major history of landslides, earthquake, subsidence etc., recorded in the past history.

5.2 Analysis of Alternative Site

The mineral deposits are site specific in nature; hence, question of seeking alternate site does not arise for this project.

5.3 Factors Behind Selection of Proposed Technology

Mechanized open cast mining operation with drilling and blasting method will be used to extract Rough Stone quarry in the area. The quarry areas fall in the clusters has following advantages –

- As the mineral deposition is homogeneous and batholith formation, therefore opencast method of working out deposit is preferred over underground method.
- The material will be loaded after sprinkling with water with the help of excavators into dumpers / trippers and transported to the needy customers.

-
- Blasting and availability of drills along with controlled blasting technology gives desired fragmentation so that the mineral is handled safely and used without secondary blasting.

Semi skilled labours fit for quarrying operations are easily available around the nearby villages.

5.4 Analysis of Alternative Technology

Open cast mechanized method has been selected for this project. This technology is having least gestation period, economically viable, safest and less labour intensive. The method has inbuilt flexibility for increasing or decreasing the production as per market condition.

CHAPTER – 6: ENVIRONMENTAL MONITORING PROGRAMME

6.0 General

Environmental Monitoring will be taken up for various environmental components as per conditions stipulated in Environmental Clearance Letter issued by MoEF & Consent to Operate issued by the State Pollution Control Board. Monitoring reports will be submitted to regulator as per statutory requirements. The entire monitoring work will be carried out by MoEF & CC / NABL recognized laboratories.

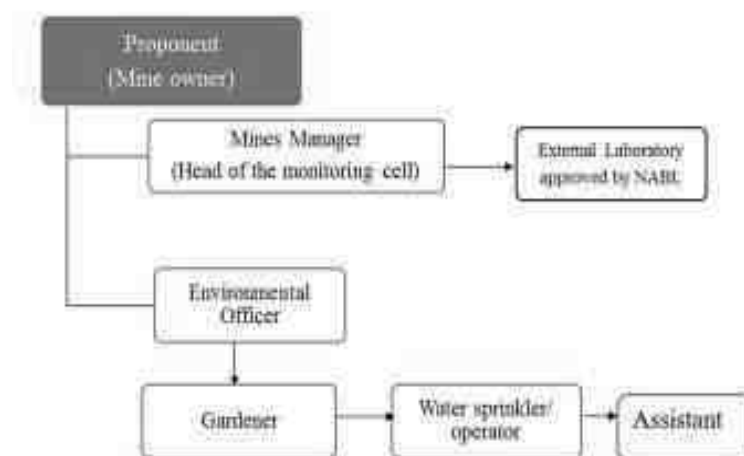
The monitoring and evaluation of environmental parameters indicates potential changes occurring in the environment, which paves way for implementation of rectifying measures wherever required to maintain the status of the natural environment. Evaluation is also a very effective tool to judge the effectiveness or deficiency of the measures adopted and provides insight for future corrections.

6.1 Methodology of Monitoring Mechanism

Implementation of EMP and periodic monitoring will be carried out by the proponents and respective quarry owners in the cluster quarries. A comprehensive monitoring mechanism has been devised for monitoring of impacts due to proposed project; Mine management level environmental protection measures like dust suppression, treatment and recycling of waste water, control of noise due to blasting and Ground vibration, maintenance of machinery and vehicles, housekeeping in the mine premises, plantation, implementation of other hand, implementation of area level protection measures like plantation and green Environmental Management Plan and environmental clearance conditions will be monitored by the proponent. On the belt development, environmental quality monitoring etc.,

An environment monitoring cell (EMC) will be constituted at the quarry consisting of following members to monitor the implementation of EMP and other environmental protection measures.

FIGURE 6.1 HIERARCHY OF ENVIRONMENTAL MONITORING CELL



The responsibilities of this cell will be:

- Implementation of pollution control measures
- Monitoring programme implementation
- Post-plantation care
- To check the efficiency of pollution control measures taken
- Any other activity as may be related to environment
- Seeking expert's advice when needed

The environmental monitoring cell will co-ordinate all monitoring programs at site and data thus generated will be regularly furnished to the State regulatory agencies. The sampling and analysis report of the monitored environmental attributes will be submitted to the Tamil Nadu Pollution Control Board (TNPCB) at a frequency of monthly, half-yearly and yearly. The half-yearly reports will be submitted to Ministry of Environment and Forest, Regional Office and SEIAA as well.

The sampling and analysis of the environmental attributes will be as per the guidelines of Central Pollution Control Board (CPCB)/Ministry of Environment, Forest and Climate Change (MoEF & CC).

6.2 *Implementation Schedule of Mitigation Measures*

The mitigation measures proposed in Chapter-4 will be implemented so as to reduce the impact on the environment due to the operations of the proposed project. Implementation schedule of mitigation measures is given in Table 6.1.

TABLE 6.1 IMPLEMENTATION SCHEDULE

Sl No.	Recommendations	Time Period	Schedule
1	Land Environment Control Measures	Before commissioning of the project	Immediately after the commencement of the project
2	Soil Quality Control Measures	Before commissioning of the project	Immediately after the commencement of the project
3	Water Pollution Control Measures	Before commissioning of the project and along with mining operation	Immediately and as project progress
4	Air Pollution Control Measures	Before commissioning of the project and along with mining operation	Immediately and as project progress
5	Noise Pollution Control Measures	Before commissioning of the project and along with mining operation	Immediately and as project progress
6	Ecological Environment	Phase wise implementation every year along with mine operations	Immediately and as project progress

6.3 *Monitoring Schedule and Frequency*

The environmental monitoring will be conducted in the mine operations as follows:

- Air quality;
- Water and wastewater quality;
- Noise levels;

- Soil Quality; and
- Greenbelt Development

The details of monitoring are detailed in Table 6.2

TABLE 6.2: PROPOSED MONITORING SCHEDULE POST EC

S. No.	Environment Attributes	Location	Monitoring		Parameters
			Duration	Frequency	
1	Air Quality	2 Locations (1 Core & 1 Buffer)	24 hours	Once in 6 months	Fugitive Dust, PM _{2.5} , PM ₁₀ , SO ₂ and NO _x .
2	Meteorology	At mine site before start of Air Quality Monitoring & IMD Secondary Data	Hourly / Daily	Continuous online monitoring	Wind speed, Wind direction, Temperature, Relative humidity and Rainfall
3	Water Quality Monitoring	2 Locations (1SW & 1 GW)	-	Once in 6 months	Parameters specified under IS:10500, 1993 & CPCB Norms
4	Hydrology	Water level in open wells in buffer zone around 1 km at specific wells	-	Once in 6 months	Depth in bgl
5	Noise	2 Locations (1 Core & 1 Buffer)	Hourly – 1 Day	Once in 6 months	Leq, Lmax, Lmin, Leq Day & Leq Night
6	Vibration	At the nearest habitation (in case of reporting)	-	During blasting Operation	Peak Particle Velocity
7	Soil	2 Locations (1 Core & 1 Buffer)	-	Once in six months	Physical and Chemical Characteristics
8	Greenbelt	Within the Project Area	Daily	Monthly	Maintenance

Source: Guidance of manual for mining of minerals, February 2010.

6.4 Environmental Policy of the Proponents

The project proponents in the proposed quarries are committed to ensure that:

- Protect the environment by control and prevention of pollution and promote green environment.
- To operate the quarry with an objective of no injuries and accidents at the work place and provide a safe work place for our employees, contractors and others who perform their duties.
- Adequate health care will be taken to all the employees and create process to reduce the adverse effect of the operations on Health of the employees.
- Provide safety appliance and continuous training in safety to employees to ensure safe production and achieve the target of zero accidents.
- Develop safe working methods and practices, remove unsafe work conditions and consider all the aspects at the early stages of process development to provide safe working atmosphere.
- Communicate Safety, Health and Environmental Policy to all employees for better understanding and practice.

6.5 Budgetary Provision for Environmental Monitoring Programme

The cost in respect of monitoring of environmental attributes, parameter to be monitored, sampling/monitoring locations with frequency and cost provision against each proposal is shown in Table 6.3. Monitoring work will be outsourced to external laboratory approved by NABL / MoEF.

The proposed total cost for Environmental Monitoring Programme for two proposed quarries in cluster for the Scheme of mining plan period is Rs 12,40,000/-.

TABLE 6.3 ENVIRONMENT MONITORING BUDGET

Parameter	Code	Capital Cost
Air Quality, Meteorology, Water Quality, Hydrology, Soil Quality Noise Quality, Vibration Study Greenbelt	P1	Rs.4,30,000
	P2	Rs.4,30,000
	P3	Rs.3,80,000
	Total	Rs. 12,40,000/-

Source: Approved Mining Plan

6.6 Reporting Schedules of Monitored Data

The monitored data on Air quality, Water quality, Noise levels and other environmental attributes will be periodically examined by the proponent with Environmental Monitoring cell and necessary corrective measures will be carried out. The monitoring data will be submitted to Tamil Nadu State Pollution Control Board in the Compliance to CTO Conditions & environmental audit statements every year to MoEF & CC and Half-Yearly Compliance Monitoring Reports to MoEF & CC Regional Office and SEIAA.

Periodical reports to be submitted to: -

- MoEF & CC – Half yearly status report
- TNPCB - Half yearly status report
- Department of Geology and Mining: quarterly, half yearly annual reports
- SEIAA, Chennai, Tamil Nadu

Besides the Mines Manager/Agent will submit the periodical reports to –

- Director of mines safety,
- Labour enforcement officer,
- Controller of explosives as per the norms stipulated by the department.

CHAPTER – 7: ADDITIONAL STUDIES

7.0 General

The following Additional Studies were done as per items identified by project proponent and items identified by regulatory authority. Items identified by public and other stakeholders will be incorporated after Public Hearing.

- Public Consultation
- Risk Assessment
- Disaster Management Plan
- Cumulative Impact Study
- Plastic Waste Management

7.1. *Public Consultation:*

Application to The Member Secretary of the Tamil Nadu Pollution Control Board (TNPCB) to conduct Public Hearing in a systematic, time bound and transparent manner ensuring widest possible public participation at the project site or in its close proximity in the district is submitted along with this Draft EIA / EMP Report and the outcome of public hearing proceedings will be detailed in the Final EIA/EMP Report.

7.2 *Risk Assessment*

The methodology for the risk assessment has been based on the specific risk assessment guidance issued by the Directorate General of Mine Safety (DGMS), Dhanbad, vide Circular No.13 of 2002, dated 31st December, 2002. The DGMS risk assessment process is intended to identify existing and probable hazards in the work environment and all operations and assess the risk levels of those hazards in order to prioritize those that need immediate attention. Further, mechanisms responsible for these hazards are identified and their control measures, set to timetable are recorded along with pinpointed responsibilities.

The cluster quarry operation will be carried out under the direction of a Qualified Competent Mine manager holding certificate of competency to manage a metalliferous mine granted by the DGMS, Dhanbad. Risk Assessment is all about prevention of accidents and to take necessary steps to prevent it from happening. Factors of risks involved due to human induced activities in connection with mining & allied activities with detailed analysis of causes and control measures for the mine is given in below Table 7.1.

TABLE 7.1 RISK ASSESSMENT & CONTROL MEASURES

S. No	Risk factors	Causes of risk	Control measures
1	Accidents due to explosives and heavy mining machineries	Improper handling and unsafe working practice	<ul style="list-style-type: none"> ▪ All safety precautions and provisions of Mine Act, 1952, Metalliferous Mines Regulation, 1961 and Mines Rules, 1955 will be strictly followed during all mining operations; ▪ Entry of unauthorized persons will be prohibited; ▪ Fire fighting and first-aid provisions in the mine office complex and mining area;

			<ul style="list-style-type: none"> ▪ Provisions of all the safety appliances such as safety boot, helmets, goggles etc. will be made available to the employees and regular check for their use. ▪ Working of quarry, as per approved plans and regularly updating the mine plans; ▪ Cleaning of mine faces shall be daily done in order to avoid any overhang or undercut; ▪ Handling of explosives, charging and firing shall be carried out by competent persons only under the supervision of a Mine Manager; ▪ Maintenance and testing of all mining equipment as per manufacturer 's guidelines.
2	Drilling& Blasting	<p>Due to improper and unsafe practices</p> <p>Due to high pressure of compressed air, hoses may burst</p> <p>Drill Rod may break</p>	<ul style="list-style-type: none"> ▪ Safe operating procedure established for drilling (SOP) will be strictly followed. ▪ Only trained operators will be deployed. ▪ No drilling shall be commenced in an area where shots have been fired until the blaster/blasting foreman has made a thorough Examination of all places. ▪ Drilling shall not be carried on simultaneously on the benches at places directly one above the other. ▪ Periodical preventive maintenance and replacement of worn-out accessories in the compressor and drill equipment as per operator manual. ▪ All drills unit shall be provided with wet drilling shall be maintained in efficient working in condition. ▪ Operator shall regularly use all the personal protective equipment.
3	Blasting	<p>Fly rock, ground vibration, Noise and dust.</p> <p>Improper charging, stemming & Blasting/fining of blast holes</p> <p>Vibration due to movement of vehicles</p>	<ul style="list-style-type: none"> ▪ The maximum charge per delay and by optimum blast hole pattern, vibrations will be controlled within the permissible limit and blast can be conducted safely. ▪ SOP for Charging, Stemming & Blasting/Firing of Blast Holes will be followed by blasting crew during initial stage of operation ▪ Shots are fired during daytime only. ▪ All holes charged on any one day shall be fired on the same day. ▪ The danger zone is and will be distinctly demarcated (by means of red flags)
4	Transportation	Potential hazards and unsafe workings	<ul style="list-style-type: none"> ▪ Before commencing work, drivers personally check the dumper/truck/tipper

		<p>contributing to accident and injuries</p> <p>Overloading of material</p> <p>While reversal & overtaking of vehicle</p> <p>Operator of truck leaving his cabin when it is loaded.</p>	<p>for oil(s), fuel and water levels, tyre inflation, general cleanliness and inspect the brakes, steering system, warning devices including automatically operated audio-visual reversing alarm, rear view mirrors, side indicator lights etc., are in good condition.</p> <ul style="list-style-type: none"> ▪ Not allow any unauthorized person to ride on the vehicle nor allow any unauthorized person to operate the vehicle. ▪ Concave mirrors should be kept at all corners ▪ All vehicles should be fitted with reverse horn with one spotter at every tipping point ▪ Loading according to the vehicle capacity ▪ Periodical maintenance of vehicles as per operator manual.
5	Natural calamities	Unexpected happenings	<ul style="list-style-type: none"> ▪ Escape Routes will be provided to prevent inundation of storm water ▪ Fire Extinguishers & Sand Buckets
6	Failure of Mine Benches and Pit Slope	Slope geometry, Geological structure	<ul style="list-style-type: none"> ▪ Ultimate or over all pit slope shall be below 60° and each bench height shall be 5m height.

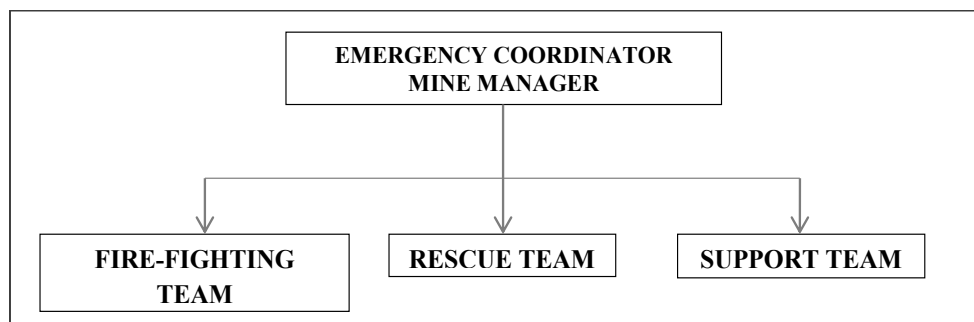
7.3 Disaster Management Plan

Natural disasters like Earthquake, Land slides has not been recorded in the past history as the terrain is categorized under seismic zone III. The area is far away from the sea hence the disaster due to heavy floods and tsunamis are not anticipated. The Disaster Management Plan is aimed to ensure safety of life, protection of environment, protection of installation, restoration of production and salvage operations in this same order of priorities.

The objective of the Disaster Management Plan is to make use of the combined resources of the mine and the outside services to achieve the following:

- Rescue and medical treatment of casualties;
- Safeguard other people;
- Minimize damage to property and the environment;
- Initially contain and ultimately bring the incident under control;
- Secure the safe rehabilitation of affected area; and
- Preserve relevant records and equipment for the subsequent inquiry into the cause and circumstances of the emergency.

In case a disaster takes place, despite preventive actions, disaster management will have to be done in line with the descriptions below. There is an organization proposed for dealing with the emergency situations and the coordination among key personnel and their team has been shown in Fig 7.1.

FIGURE 7.1: DISASTER MANAGEMENT TEAM LAYOUT FOR P1 & P2

The emergency organization shall be headed by emergency coordinator who will be qualified competent mine manager. There would be three teams for taking care of emergency situations – Fire-Fighting Team, Rescue Team and Support Team. The proposed composition of the teams is given in Table 7.2.

TABLE 7.2: PROPOSED TEAMS TO DEAL WITH EMERGENCY SITUATION

DESIGNATION	QUALIFICATION
FIRE-FIGHTING TEAM	
Team Leader/ Emergency Coordinator (EC)	Mines Manager
Team Member	Mines Foreman
Team Member	Mining Mate
RESCUE TEAM	
Team Leader/ Emergency Coordinator (EC)	Mines Manager
Team Member/ Incident Controller (IC)	Environment Officer
Team Member	Mining Foreman
SUPPORT TEAM	
Team Leader/ Emergency Coordinator (EC)	Mines Manager
Assistant Team Leader	Environment Officer
Team Member	Mining Mate
Security Team Leader/ Emergency Security Controller	Mines Foreman

Once the mine becomes operational, the above table along with names of personnel will be prepared and made easily available to workers. A mobile communication network and wireless shall connect Mine Emergency Control Room (MECR) to control various departments of the mine, fire station and neighbouring industrial units/mines.

Roles and responsibilities of emergency team –

(a) Emergency coordinator (EC)

The emergency coordinator shall assume absolute control of site

(b) Incident controller (IC)

Incident controller shall be a person who shall go to the scene of emergency and supervise the action plan to overcome or contain the emergency. Shift supervisor or Environmental Officer shall assume the charge of IC.

(c) Communication and advisory team

The advisory and communication team shall consist of heads of Mining Departments i.e., Mines Manager

(d) Roll call coordinator

The Mine Foreman shall be Roll Call Coordinator. The roll call coordinator will conduct the roll call and will evacuate the mine personnel to assembly point. His prime function shall be to account for all personnel on duty.

(e) Search and rescue team

There shall be a group of people trained and equipped to carryout rescue operation of trapped personnel. The people trained in first aid and fire-fighting shall be included in search and rescue team

(f) Emergency security controller

Emergency Security Controller shall be senior most security person located at main gate office and directing the outside agencies e.g. fire brigade, police, doctor and media men etc.,

Emergency control procedure

The onset of emergency, will in all probability, commence with a major fire or explosion or collapse of wall along excavation and shall be detected by various safety devices and also by members of operational staff on duty. If located by a staff member on duty, he (as per site emergency procedure of which he is adequately briefed) will go to nearest alarm call point, break glass and trigger off the alarms. He will also try his best to inform about location and nature of accident to the emergency control room. In accordance with work emergency procedure the following key activities will immediately take place to interpret and take control of emergency.

- On site fire crew led by a fireman will arrive at the site of incident with fire foam tenders and necessary equipment.
- Emergency security controller will commence his role from main gate office
- Incident controller shall rush to the site of emergency and with the help of rescue team and will start handling the emergency.
- Site main controller will arrive at MECR with members of his advisory and communication team and will assume absolute control of the site.
- He will receive information continuously from incident controller and give decisions and directions to:
 - Incident controller
 - Mine control rooms
 - Emergency security controller

Proposed fire extinguishers at different locations –

The following type of fire extinguishers is proposed at strategic locations within the quarry.

Location	Type of Fire Extinguishers
Electrical Equipment's	CO ₂ type, foam type, dry chemical powder type
Fuel Storage Area	CO ₂ type, foam type, dry chemical powder type, Sand bucket
Office Area	Dry chemical type, foam type

Alarm system to be followed during disaster

On receiving the message of disaster from Site Controller, fire-fighting team, the mine control room attendant will sound siren wailing for 5 minutes. Incident controller will arrange to broadcast disaster message through public address system.

On receiving the message of "Emergency Over" from Incident Controller the emergency control room attendant will give "All Clear Signal", by sounding alarm straight for 2 minutes.

The features of alarm system will be explained to one and all to avoid panic or misunderstanding during disaster.

In order to prevent or take care of hazard / disasters if any the following control measures have been adopted.

- All safety precautions and provisions of Metalliferous Mines Regulations (MMR), 1961 is strictly followed during all mining operations
- Fire fighting and first-aid provisions in the mines office complex and mining area will be provided.
- Provisions of all the safety appliances such as safety boot, helmets, goggles, dust masks, ear plugs and ear muffs etc. are made available to the employees and the use of same is strictly adhered to through regular monitoring
- Training and refresher courses for all the employees working in the quarry in phase manner
- Cleaning of mine faces will be carried out regularly
- Provision of high-capacity standby pumps with generator sets with enough quantity of diesel for emergency pumping especially during monsoon.
- A blasting SIREN will be used at the time of blasting for audio signal.
- Checking of blasting area for any un-blasted hole or material.
- Warning notice boards indicating the time of blasting and NOT TO TRESPASS will be displayed at prominent places

7.4 CUMULATIVE IMPACT STUDY

There are three proposed and one Existing quarries falls in the cluster. The list of quarries is as below –

TABLE 7.3: LIST OF QUARRIES WITHIN 500 METER RADIUS FROM THIS PROPOSAL

PROPOSED QUARRIES					
CODE	Name of the Proponent and Address	S.F. Nos, Village & Taluk	Extent in Ha	G.O. No & Date	Status
P-1	M/s. Sri Devaraajaa 'M' Sand (Thiru. D.Mathiazhagan- Managing Partner)	78/1A(P), 78/1B(P) of KothapettaVillage , Krishnagiri Taluk	4.00.0	Roc.418/2018/Mi nes dated: 30.05.2018	Lr No. SEIAA- TN/F.No.10244/2023/SEAC/ToR- 1681/2024 Dated:14.02.2024.
P-2	Tmt.K.M.Vijaya W/o.D.Mathiazhagan	78/1B (P), of KothapettaVillage , Krishnagiri Taluk	4.00.0	Roc.419/2017/Mi nes dated: 30.05.2018	Lr No. SEIAA- TN/F.No.10248/SEAC/ToR- 1676/2024 Dated:14.02.2024.
P-3	M/s. A.M. Quality Stone (Kowshik dev- Managing Partner	87/1B1B & 87/1B2B, Kothapetta Village, Krishnagiri Taluk,	4.74.9	Roc.1314/2023/M dated: 10.11.2023	ToR Identification No TO23B0108TN5558418N dated 13.03.2024
		Total	12.74.90Ha		
EXISTING QUARRY					

CODE	Name of the Proponent and Address	S.F. Nos, Village & Taluk	Extent in Ha	G.O. No & Date	Lease Period
E-1	M/S. Ma Quality Stone	87/1B2(P), KothapettaVillage , Krishnagiri Taluk	3.70.0	Roc.1179/2020/M ines dated: 23.11.2022	23.11.2022 to 22.11.2032
		Total	3.70.0Ha		
NIL					
ABANDONED/EXPIRED QURRIES					
CODE	Name of the Proponent and Address	S.F. Nos, Village & Taluk	Extent in Ha	G.O. No & Date	Lease Period
A-1	Thiru.Ganesan	56/1(P-D) KothapettaVillage , Krishnagiri Taluk	2.54.0	Roc.611/2009/Mi nes dated: 14.05.2015	14.05.2015 to 13.05.2020
A-2	Tmt.Sa.Sumitha Shankar	56/1 (P-5) KothapettaVillage , Krishnagiri Taluk	1.20.0	Roc.49/2016/Min es dated: 18.08.2016	1.09.2016 to 31.08.2021
A-3	Thiru.A.Madesh	56/1(P-C) KothapettaVillage , Krishnagiri Taluk	3.06.0	Roc.126/2010/Mi nes dated: 27.10.2009	03.05.2010 to 02.05.2015
		Total	6.80.0		
TOTAL CLUSTER EXTENT			11.70.0 Ha		

Source :500m Cluster letter by AD, G&M, Krishnagiri.

Note:-

- Cluster area is calculated as per MoEF & CC Notification – S.O. 2269 (E) Dated: 01.07.2016

As per above notification S.O.2269(E) dated : 01.07.2016 in para (b) in Appendix XI,- (ii)(5): The lease not operative for three years or more and leases which have got environmental clearance as on 15th January, 2016 shall not be counted for calculating the area of cluster, but shall be included in the Environment Management Plan and the Regional Environmental Management Plan”

TABLE 7.4: SALIENT FEATURES OF THE PROPOSED PROJECTS IN CLUSTER P1-P2-P3

SALIENT FEATURES OF PROPOSAL “P1”	
Name of the Mine	M/s. Sri Devaraajaa ‘M’ Sand (Thiru. D.Mathiazhagan- Managing Partner)
Land Type	It is a Patta land – non-Forest
S.F. No.	78/1A(P), 78/1B(P)
Extent	4.00.0 Ha
Previous EC clearance details	DEIAA – KGI Lr No 35/DEIAA-KGI/Ec.No. 27/2018 Dated 27.02.2018 EC Quantity: 10,25,995m ³ Depth 71m (25m Agl +46m Bgl)
TNPCB /CTO Copy	F.1682HSR/RS/DEE/TNPCB/HSR/A/2022 Dated: 22.08.2022
Previous quarry operation details	It is an Existing application
Existing Pit Dimension	210m(L) x 97m (W) x20m(D) (Avg)
Depth of Mining	41m (1m gravel +40m Rough stone)

Geological Resources	Rough Stone quarry (Volume)	Recoverable Geological in m ³ 95%	Mine waste in m ³ 5%	Gravel
	10,85,740 m ³	1,031,457	54,283	2,329m ³
Mineable Reserves	Rough Stone quarry (Volume)	Mineable reserves Recoverable in m ³ 95%	Mine waste in m ³ 5%	Gravel
	5,13,365m ³	4,87,698	25,667	799m ³
Production for Scheme period (Approved SOM) (2023-2028)	Rough Stone quarry (Volume)	Recoverable reserves in m ³ 95%	Mine waste in m ³ 5%	Gravel
	5,13,365 m ³	4,87,698	25,667	799 m ³
Peak Production in this Scheme period	1,19,857 m ³ of Rough stone			
Mining Plan Period / Lease Period	5 Years			
Ultimate Pit Dimension	287m (L) X 121m (W) X 41m (D)			
Toposheet No	57 -L/2			
Water table depth	76m-82m			
Water Requirements	2.5 KLD			
Latitude	12°32'49.8798"N to 12°32'46.6000"N			
Longitude	78°12'49.4269"E to 78°12'39.2801"E			
Highest Elevation	Slightly elevated topography, surrounded by quarries and Crushing units. Altitude of the area is 537m MSL.			
Machinery	Jack Hammer	5		
	Compressor	1		
	Hydraulic Excavator	2		
	Tippers	3		
Blasting	Drilling is carried out by a Jack Hammer drill of 30-32mm diameter, Nitrate Mixture Gelatine packets, and electric / ordinary detonators with delay elements will be used for blasting purpose.			
Manpower Deployment	21 Nos			
Total Cost	A. Fixed Asset Cost	Rs. 33,00,000/-		
	B. Operational Cost	Rs. 40,00,000/-		
	C.EMP Cost	Rs. 4,30,000/-		
	Total	Rs. 77,30,000/-		
CER Cost	Rs.5,00,000/-			
Nearest Habitation	590m-W			
Nearest R.F	Peddathalapalli R.F-2.2km-SW			
Nearest Wildlife	Cauvery North Wildlife Sanctuary-26km-SW Cauvery South Wildlife Sanctuary-40km-SW			
SALIENT FEATURES OF PROPOSAL "P2"				
Name of the Mine	Tmt.K.M.Vijaya			
Land Type	It is a Patta land – non-Forest			
S.F. Nos	78/1B (P),			
Extent	4.00.0 Ha			
Previous EC clearance details	DEIAA – KGI Letter No. 34/DEIAA-KGI/Ec.No. 26/2018 Dated 27.02.2018 EC Quantity: 10,80,884m ³ Depth 71m (25m Agl +46m Bgl)			
TNPCB /CTO Renewal Copy	F.1682HSR/RS/DEE/TNPCB/HSR/A/2022 Dated: 22.08.2022			
Previous quarry operation details	It is an Existing Lease.			

Existing Pit Dimension	95.0m(L) x 93m (W) x12m(D) (Avg)			
Geological Reserves	Rough Stone quarry (Volume)	Recoverable Geological in m ³ 95%	Mine waste in m ³ 5%	Gravel
	16,04,820m ³	1524579	80241	22,960m ³
Mineable Reserves	Rough Stone quarry (Volume)	Mineable reserves Recoverable in m ³ 95%	Mine waste in m ³ 5%	Gravel
	9,68,575m ³	920148	48427	20,711 m ³
Production for Scheme period (Approved SOM) (2023-2028)	Rough Stone quarry (Volume)	Recoverable reserves in m ³ 95%	Mine waste in m ³ 5%	Gravel
	7,93,205m ³	7,53,546	39,659	20,711 m ³
Peak Production in this Scheme period	2,26,922 m ³ of Rough stone			
Approved Scheme of Mining Plan Period / Lease Period	5 Years			
Depth of mining	31m (1m Gravel +30m Rough stone)			
Ultimate Pit Dimension	286m(L) x 136m (W) x41m(D)			
Toposheet No	57 L/2			
Latitude	12°32'42.0172''N to 12°32'44.4928''N			
Longitude	78°12'54.6408''E to 78°12'42.8804''E			
Highest elevation	Slightly elevated topography, surrounded by quarries and Crushing units. Altitude of the area is 537m MSL.			
Water table depth	76-82m			
Water level requirements	2.5KLD			
Machinery proposed	Jack Hammer	5		
	Compressor	1		
	Hydraulic Excavator	2		
	Tipplers	3		
Blasting	The massive formation shall be broken into pieces of portable size by drilling and proposed control blasting using jack hammers and shot hole Blasting. Usage of Slurry Explosive with MSD detonators			
Manpower Deployment	21Nos			
Total Project Cost	A. Fixed Asset Cost	Rs. 32,90,000/-		
	B. Operational Cost	Rs. 40,00,000/-		
	C. EMP Cost	Rs. 4,30,000/-		
	Total	Rs. 77,20,000/-		
CER Cost	Rs.5,00,000/-			
Nearest Habitation	700m-W			
Nearest R.F	Peddathalapalli R.F-2.30km-SW			
Nearest Wildlife	Cauvery North Wildlife Sanctuary-26km-SW Cauvery South Wildlife Sanctuary-41km-SW			

Source: Approved Scheme of Mining Plan

SALIENT FEATURES OF PROPOSAL "P3"	
Name of the Mine	M/s. A.M. Quality Stone (Kowshik dev- Managing Partner)
Land Type	It is a Patta land – non-Forest
S.F. Nos	87/1B1B & 87/1B2B
Extent	4.74.90 Ha
Previous EC clearance details	Lr. No. SEIAA-TN/F.No.3215/EC/1(a)/2645/2015, Dated:05.01.2016 EC approved Quantity: 52,620m ³ Depth 10m
TNPCB /CTO Renewal Copy	F.0770HSR/RS/DEE/TNPCB/HSR/W/2020 Dated: 20.06.2020
DFO NOC Copy	No.6846/2023/L dated: 10.07.2023

Previous quarry operation details	Previous Lessee: Tmt. Qamrunnisa Previous Lease Period: 02.03.2016 – 01.03.2021, S.F.Nos 87/1B1(Part) & 87/1B2 (Part) (Extent : 4.75.0 Ha) Proceeding No: Roc No. 08/2013/Mines-1, Dated: 05.02.2016 It is an Existing Lease.		
Existing Pit Dimension	Pit I: 19,730 sq.mt. 15m (D) Max Pit II: 10,240 Sq.mt. 7m (D) Max		
Geological Reserves	Rough Stone quarry (Volume)	Recoverable Geological in m ³ 100%	Topsoil
	8,11,453m ³	8,11,453m ³	9,469m ³
Mineable Reserves	Rough Stone quarry (Volume)	Mineable reserves Recoverable in m ³ 100%	Topsoil
	4,81,920m ³	4,81,920m ³	8,706 m ³
Production for five-year period (Approved Mining Plan)	Rough Stone quarry (Volume)	Recoverable reserves in m ³ 100%	Topsoil
	4,81,920m ³	4,81,920m ³	8,706 m ³
Peak Production in the mining plan period	1,33,980m ³ of Rough stone		8,706 m ³ Topsoil
Approved Mining Plan Period / Lease Period	5 Years		
Depth of mining	45 (1m Topsoil +44m Roughstone)		
Ultimate Pit Dimension	229m(L) x 144m (W) x45m(D)		
Toposheet No	57 L/2		
Latitude	12° 33' 05.33" N to 12° 32' 58.37" N		
Longitude	78° 12' 53.41" E to 78° 12' 52.97" E		
Highest elevation	Almost an elevated sloping towards West covered with the Roughstone Altitude of the area is 565m MSL.		
Water table depth	The Ground water is about 67m depth from ground level.		
Waterlevel requirements	2.3KLD		
Machinery proposed	Jack Hammer		4
	Compressor		2
	Hydraulic Excavator		3
	Tipplers		3
Blasting	The massive formation shall be broken into pieces of portable size by drilling and proposed control blasting using jack hammers and shot hole Blasting. Usage of Slurry Explosive with MSD detonators		
Manpower Deployment	18 Nos		
Total Project Cost	A. Fixed Asset Cost		Rs. 50,12,000/-
	B. Operational Cost		Rs. 30,00,000/-
	C. EMP Cost		Rs. 3,80,000/-
	Total		Rs. 83,92,000/-
CER Cost	Rs.5,00,000/-		
Nearest Habitation	210m-E		
Nearest R.F	Peddathalapalli R.F-2.77km-SW		
Nearest Wildlife	Cauvery North Wildlife Sanctuary-36.5km-SW Cauvery South Wildlife Sanctuary-41km-SW		

Source: Approved Mining Plan

SALIENT FEATURES OF PROPOSAL "E1"	
Name of the Mine	M/S. Ma Quality Stone

Land Type	It is a Patta land – non-Forest			
S.F. Nos	87/1B2(P),			
Extent	3.70.0 Ha			
DFO Letter	Noc.No 6921/2022/L dated: 17.08.2022			
Previous quarry operation details	It is an Existing Lease.			
Existing Pit Dimension	95.0m(L) x 93m (W) x12m(D) (Avg)			
Geological Reserves	Rough Stone quarry m ³ (Volume)	Recoverable Geological in m ³ 95%	Mine waste in m ³ 5%	Topsoil
	7,35,007m ³	698258	36749	7,713m ³
Mineable Reserves	Rough Stone quarry (Volume)	Mineable reserves Recoverable in m ³ 95%	Mine waste in m ³ 5%	Topsoil
	6,50,251m ³	617740	32511	5,836 m ³
Proposed Quantity of Reserves	Rough Stone quarry (Volume)	Recoverable reserves in m ³ 95%	Mine waste in m ³ 5%	Topsoil
	5,27,345m ³	5,00,977	26368	12
Peak Production in this Scheme period	1,37,449 m ³ of Rough stone			
Total lease granted	10 years			
Approved Mining Plan Period / Lease Period	5 Years			
Depth of mining	50m (1m top soil + 49m Rough Stone) (45m AGL + 5m BGL)			
Ultimate Pit Dimension	402m(L) x 101m (W) x50m(D)			
Toposheet No	57 L/2			
Latitude	12°33'04.6251''N to 12°32'53.7570''N			
Longitude	78°12'46.0552''E to 78°12'57.5020''E			
Highest elevation	The area is situated on Elevated terrain and gentle towards southeasterly side covered with Roughstone which does not sustain any type of vegetation. The altitude of the area is 520m above MSL.			
Water table depth	65m			
Water level requirements	3.2 KLD			
Machinery proposed	Jack Hammer	6		
	Compressor	1		
	Hydraulic Excavator	1		
	Tippers	2		
Blasting	The massive formation shall be broken into pieces of portable size by drilling and proposed control blasting using jack hammers and shot hole Blasting. Usage of Slurry Explosive with MSD detonators			
Manpower Deployment	15Nos			
Total Project Cost	A. Fixed Asset Cost	Rs. 33,20,000/-		
	B. Operational Cost	Rs. 30,00,000/-		
	C. EMP Cost	Rs. 3,20,000/-		
	Total	Rs. 66,40,000/-		
CER Cost	Rs.5,00,000/-			
Nearest Habitation	325m-NE			

Source: Approved Mining Plan

Impact on Air Environment –

Calculating the Cumulative Load of Mining within the cluster is as shown in table 7.5 & 7.6

TABLE 7.5 CUMULATIVE PRODUCTION LOAD OF ROUGH STONE QUARRY IN CLUSTER

Quarry	Production for Five-year plan period m ³	Per Year Production in m ³	Per Day Production in m ³	Number of Lorry Load Per Day @ 12m ³ per load
P1	4,87,698	97,540	325	27Trips /Day
P2	7,53,546	1,50,709	502	42Trips /Day
P3	4,81,920	96,384	321	27Trips /Day
Total	17,23,164	3,44,633	1148	96 Trips /Day
Quarry	Production for five-year plan period m ³	Per Year Production in m ³	Per Day Production in m ³	Number of Lorry Load Per Day @ 12m ³ per load
E1	5,00,977	1,00,195	334	28 Trips /Day
Total	5,00,977	1,00,195	334	28 Trips /Day
G.Total	22,24,141	4,44,828	1,482	124 Trips /Day

TABLE 7.6: CUMULATIVE PRODUCTION OF GRAVEL IN CLUSTER

Quarry	Mineable Reserves in m ³	Per Year Production in m ³	Per Day Production in m ³	Number of Lorry Load @ 12m ³ per load
P1	799	799	3	1 Trips /Day
P2	20,711	20,711	69	6 Trips /Day
P3	-	-	-	-
Total	21,510	21,510	72	7 Trips/ Day
E1	-	-	-	-
G.Total	21,510	21,510	72	7 Trips/ Day

TABLE 7.7: CUMULATIVE PRODUCTION OF TOPSOIL IN CLUSTER

Quarry	Mineable Reserves in m ³	Per Year Production in m ³	Per Day Production in m ³	Number of Lorry Load @ 12m ³ per load
P3	8,706	8,706	29	2
Total	8,706	8,706	29	2 Trips/ Day

Source: Approved Scheme of Mining plans of the respective projects

Based on the above production quantities the emissions due to various activities in all the 3proposal quarries and 1 existing quarry includes various activities like ground preparation, excavation, handling and transport of mineral. These activities have been analysed systematically basing on USEPA-Emission Estimation Technique Manual, for Mining AP-42, to arrive at possible emissions to the atmosphere and estimated emissions are given in Table 7.7.

TABLE 7.7: EMISSION ESTIMATION FROM CLUSTER

EMISSION ESTIMATION FOR QUARRY "P1"				
	Activity	Source type	Value	Unit
Estimated Emission Rate for PM ₁₀	Drilling	Point Source	0.110788800	g/s
	Blasting	Point Source	0.004037325	g/s
	Mineral Loading	Point Source	0.045457385	g/s
	Haul Road	Line Source	0.002501864	g/s/m
	Overall Mine	Area Source	0.071475689	g/s
Estimated Emission Rate for SO ₂	Overall Mine	Area Source	0.001433588	g/s
Estimated Emission Rate for NO _x	Overall Mine	Area Source	0.000124856	g/s
EMISSION ESTIMATION FOR QUARRY "P2"				
	Activity	Source type	Value	Unit
Estimated Emission Rate for PM ₁₀	Drilling	Point Source	0.134171398	g/s
	Blasting	Point Source	0.010517540	g/s

	Mineral Loading	Point Source	0.048827315	g/s
	Haul Road	Line Source	0.002522445	g/s/m
	Overall Mine	Area Source	0.076799911	g/s
Estimated Emission Rate for SO ₂	Overall Mine	Area Source	0.002751769	g/s
Estimated Emission Rate for NO _x	Overall Mine	Area Source	0.000251510	g/s
EMISSION ESTIMATION FOR QUARRY "P3"				
	Activity	Source type	Value	Unit
Estimated Emission Rate for PM ₁₀	Drilling	Point Source	0.112804437	g/s
	Blasting	Point Source	0.004418200	g/s
	Mineral Loading	Point Source	0.045991177	g/s
	Haul Road	Line Source	0.002504304	g/s/m
	Overall Mine	Area Source	0.077182195	g/s
	Estimated Emission Rate for SO ₂	Overall Mine	Area Source	0.001612278
Estimated Emission Rate for NO _x	Overall Mine	Area Source	0.000164766	g/s

Source: Emission Formula

TABLE 7.8: INCREMENTAL & RESULTANT GLC WITHIN CLUSTER

PM ₁₀ in µg/m ³	
Location	AAQ1 – CORE
Background (average)	40.8
Highest Incremental	16.8
Resultant	57.6
NAAQ Norms	100 µg/m ³
PM _{2.5} in µg/m ³	
Background (average)	18.9
Highest Incremental	9.77
Resultant	28.7
NAAQ Norms	80 µg/m ³
SO ₂ in µg/m ³	
Location	AAQ1 – CORE
Background (average)	6.2
Highest Incremental	2.39
Resultant	8.6
NAAQ Norms	80 µg/m ³
NO _x in µg/m ³	
Location	AAQ1 – CORE
Background (average)	20.6
Incremental	12.68
Resultant	33.3
NAAQ Norms	80 µg/m ³

Noise Environment

Noise pollution is mainly due to operation like drilling & blasting and plying of trucks & HEMM. Cumulative Noise modelling has been carried out considering blasting and compressor operation (drilling) and transportation activities. Predictions have been carried out to compute the noise level at various distances around the different quarries within the 500 m radius.

For hemispherical sound wave propagation through homogeneous loss free medium, one can estimate noise levels at various locations at different sources using model based on first principle.

$$Lp_2 = Lp_1 - 20 \log (r_2/r_1) - Ae_{1,2}$$

Where:

Lp₁ & Lp₂ are sound levels at points located at distances r₁ & r₂ from the source.

$A_{e1,2}$ is the excess attenuation due to environmental conditions. Combined effect of all sources can be determined at various locations by logarithmic addition.

$$L_{p\text{total}} = 10 \log \{10^{(L_{p1}/10)} + 10^{(L_{p2}/10)} + 10^{(L_{p3}/10)} + \dots\}$$

Attenuation due to Green Belt has been taken to be 4.9 dB (A). The inputs required for the model are:

Source data has been computed taking into account of all the machinery and activities used in the mining process.

TABLE 7.9: PREDICTED NOISE INCREMENTAL VALUES FROM CLUSTER

Location ID	N1	N2	N3	N4	N5	N6	N7
Maximum Monitored Value (Day) dB(A)	48.5	48.5	46.8	45.7	45.7	42.9	42.5
Incremental Value dB(A)	60.1	56.6	41.0	24.8	27.0	22.6	28.1
Total Predicted Noise level dB(A)	60.4	57.2	47.8	45.7	45.8	42.9	42.7
NAAQ Standards	Industrial		Day Time- 75 dB (A)		Night Time- 70 dB (A)		
	Residential		Day Time- 55 dB (A)		Night Time- 45 dB (A)		

Source: Lab Monitoring Data

The incremental noise level is found within the range of 22.6– 41.0 dB (A) in Buffer zone. The noise level at different receptors in buffer zone is lower due to the distance involved and other topographical features adding to the noise attenuation. The resultant Noise level due to monitored values and calculated values at the receptors are based on the mathematical formula considering attenuation due to Green Belt as 4.9 dB (A) the barrier effect. From the above table, it can be seen that the ambient noise levels at all the locations near habitations are within permissible limits of Residential Area (buffer zone) as per THE NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000 (The Principal Rules were published in the Gazette of India, vide S.O. 123(E), dated 14.2.2000 and subsequently amended vide S.O. 1046(E), dated 22.11.2000, S.O. 1088(E), dated 11.10.2002, S.O. 1569 (E), dated 19.09.2006 and S.O. 50 (E) dated 11.01.2010 under the Environment (Protection) Act, 1986.).

Ground Vibrations

Ground vibrations due to mining activities in the all the 2-proposal quarry within cluster are anticipated due to operation of Mining Machines like Excavators, drilling and blasting, transportation vehicles, etc. However, the major source of ground vibration from the all the 2-proposal quarry is blasting. The major impact of the ground vibrations is observed on the domestic houses located in the villages nearby the mine lease area. The kuchha houses are more prone to cracks and damage due to the vibrations induced by blasting whereas RCC framed structures can withstand more ground vibrations. Apart from this, the ground vibrations may develop a fear factor in the nearby settlements.

Another impact due to blasting activities is fly rocks. These may fall on the houses or agricultural fields nearby the mining areas and may cause injury to persons or damage to the structures. Nearest Habitations from 2 mines respectively are as in below Table 7.10.

TABLE 7.10: NEAREST HABITATION FROM EACH MINE

Location ID	Distance in Meters
Habitation Near P1	590-W
Habitation Near P2	700-W

Habitation Near P3	210-E
Habitation Near E1	325-NE

Source: Satellite Imagery and Field Data

The ground vibrations due to the blasting in all the mines are calculated using the empirical equation for assessment of peak particle velocity (PPV) is:

$$V = K [R/Q^{0.5}]^{-B}$$

Where –

V = peak particle velocity (mm/s)

K = site and rock factor constant

Q = maximum instantaneous charge (kg)

B = constant related to the rock and site (usually 1.6)

R = distance from charge (m)

TABLE 7.11: GROUND VIBRATIONS AT 2 MINES

Location ID	Maximum Charge in kgs	Nearest Habitation in m	PPV in m/ms
P1	74	590	0.577
P2	140	700	0.731
P3	139	210	4.987

Source: PPV Calculation

From the above table, the charge per blast is considered as maximum in each mine and the resultant PPV is well below the Peak Particle Velocity of 8 mm/s as per Directorate General of Mines Safety for safe level criteria through Circular No. 7 dated 29/8/1997.

Socio Economic Environment –

The 2 mines shall provide employment and revenue will be created to government.

TABLE 7.12: SOCIO ECONOMIC BENEFITS FROM CLUSTER MINES

Location Code	Employment	Project Cost	CER Cost
P1	21	Rs. 77,30,000/-	Rs.5,00,000/-
P2	21	Rs. 77,20,000/-	Rs.5,00,000/-
P3	18	Rs. 83,92,000/-	Rs.5,00,000/-
E1	15	Rs.66,40,000	Rs.5,00,000/-
Grand Total	75	Rs. 3,04,82,000/-	Rs.20,00,000/-

A total of 60people will get employment due to 3 mines in cluster. Allocation for Corporate Environment Responsibility (CER) shall be made as per Government of India, MoEF & CC Office Memorandum F.No.22-65/2017-IA.III, Dated: 01.05.2018 by all the mines.

As per para 6 (II) of the office memorandum, all the mines being a green field project & Capital Investment is ≤ 100 crores, they shall contribute 2% of Capital Investment towards CER as per directions of EAC/SEAC.

- 3 Proposed projects shall fund towards CER – **Rs.15,00,000/-**

- 1 Existing projects shall fund towards CER **Rs. 5,00,000/-**

TABLE 7.13: GREENBELT DEVELOPMENT BENEFITS FROM 3MINES

PROPOSAL FOR P1				
Year	No. of trees proposed to be planted	Survival %	Area to be planted	Name of the species
I	It is proposed to plant 2000Nos of trees in the 1 st year	80%	Safety barrier, Unutilized areas and nearby village roads	Neem, Pongamia pinnata, Casuarina, etc
PROPOSAL FOR P2				
I	It is proposed to plant 2000 Nos of trees in the 1 st year	80%	Safety barrier, Unutilized area's and nearby village roads	Neem, Pongamia pinnata, Casuarina, etc.,
PROPOSAL FOR P3				
I	It is proposed to plant 2400 Nos of trees in the 1 st year	80%	Safety barrier, Unutilized area's and nearby village roads	Neem, Pongamia pinnata, Casuarina, etc.,

Based on the Proposed Mining Plans it's anticipated that there shall growth of native species of Neem, Pongamia Pinnata, Casuarina, etc in the Cluster at a rate of 6,400 Trees Planted over a period of 5 Years with Survival Rate of 80% over an area of all proposed quarries.

7.5 PLASTIC WASTE MANAGEMENT PLAN FOR P1 TO P3

All the Project Proponent shall comply with Tamil Nadu Government Order (Ms) No. 84 Environment and Forest (EC.2) Department Dated: 25.06.2018 regarding ban on one time use and throw away plastics irrespective of thickness with effect from 01.01.2019 under Environment (Protection) Act, 1986.

Objective –

- To investigate the actual supply chain network of plastic waste.
- To identify and propose a sustainable plastic waste management by installing bins for collection of recyclables with all the plastic waste
- Preparation of a system design layout, and necessary modalities for implementation and monitoring.

TABLE 7.14: ACTION PLAN TO MANAGE PLASTIC WASTE

Sl.No.	Activity	Responsibility
1	Framing of Layout Design by incorporating provision of the Rules, user fee to be charged from waste generators for plastic waste management, penalties/fines for littering, burning plastic waste or committing any other acts of public nuisance	Mines Manager
2	Enforcing waste generators to practice segregation of bio-degradable, recyclable and domestic hazardous waste	Mines Manager
3	Collection of plastic waste	Mines Foreman
4	Setting up of Material Recovery Facilities	Mines Manager

5	Segregation of Recyclable and Non-Recyclable plastic waste at Material Recovery Facilities	Mines Foreman
6	Channelization of Recyclable Plastic Waste to registered recyclers	Mines Foreman
7	Channelization of Non-Recyclable Plastic Waste for use either in Cement kilns, in Road Construction	Mines Foreman
8	Creating awareness among all the stakeholders about their responsibility	Mines Manager
9	Surprise checking's of littering, open burning of plastic waste or committing any other acts of public nuisance	Mine Owner

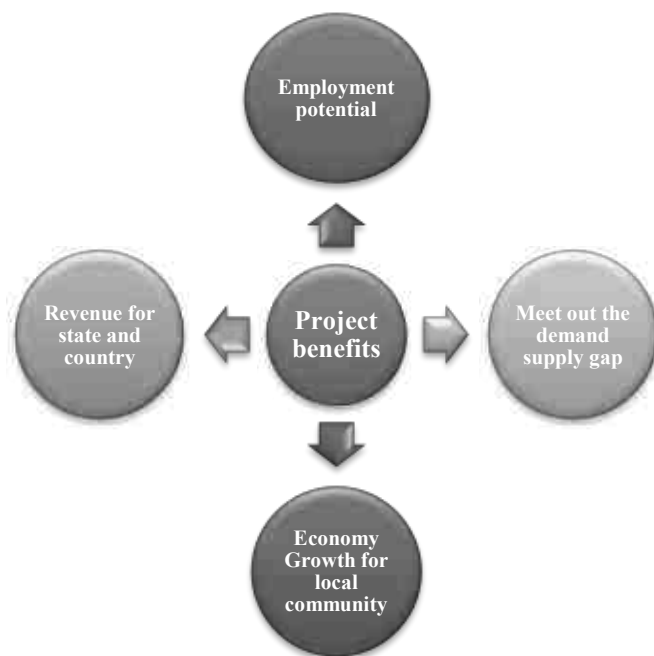
Source: Proposed by FAE's and EC

CHAPTER – 8: PROJECT BENEFITS

8.0 General

The three Proposed Projects for Quarrying Rough Stone quarry at Kothapetta Village Cluster Quarries Village aims to produce cumulatively **17,23,164m³** Rough Stone quarry over period of five Years & Gravel 21,510 m³ and 8,706 m³ of Topsoil over a period of 1 Years. This will enhance the socio-economic activities in the adjoining areas and will result in the following benefits

- Increase in Employment Potential
- Improvement in Socio-Economic Welfare
- Improvement in Physical Infrastructure
- Improvement in Social infrastructure



8.1 Employment Potential

It is proposed to provide employment to about 60 persons for carrying out mining operations and give preference to the local people in providing employment. In addition, there will be opportunity for indirect employment to many people in the form of contractual jobs, business opportunities, service facilities etc. the economic status of the local people will be enhanced due to mining project.

8.1 Socio-Economic Welfare Measures Proposed

The impact of mining activity in the area will be more positive than negative on the socio-economic environment in the immediate project impact area. The employment opportunities both direct and indirect will contribute to enhanced money incomes to job seekers with minimal skill sets especially among the local communities.

8.1 Improvement in Physical Infrastructure

The proposed project site is located in Kothapetta Village, Krishnagiri Taluk, Krishnagiri District of Tamil Nadu and the area have communications, roads and other facilities already well established. The following physical infrastructure facilities will further improve due to the cluster quarry projects.

- Road Transport facilities
- Communications
- Medical, Educational and social benefits will be made available to the nearby civilian population in addition to the workmen employed in the mine.

8.1 Improvement in Social Infrastructure

The quarry projects in the region will have positive impact on the social economic condition of the area by way of providing employment to the local peoples; thereby increasing the per capita income, housing, education, medical and transportation facilities, economic status, health and agriculture.

- Social welfare program like medical camps, educational facilities to the poverty level students, providing water supply from the quarries during drought seasons will be taken from the project proponents.
- Supplementing Govt. efforts in health monitoring camps, social welfare and various Awareness programs among the rural population.

8.1 Other Tangible Benefits

The proposed quarry project is likely to have other tangible benefits as given below.

- Indirect employment opportunities to local people in contractual works like construction of infrastructural facilities, transportation, sanitation, for supply of goods and services to the quarry site and other community services.
- Additional housing demand for rental accommodation will increase.
- Cultural, recreation and aesthetic facilities will also improve.
- Improvement in communication, transport, education, community development and medical facilities and overall change in employment and income opportunity.
- The State Government will also benefit directly from the proposed mine, through increased revenue from royalties, cess, DMF, GST etc.,

CORPORATE SOCIAL RESPONSIBILITY

Individual Project Proponents will take responsibility to develop awareness among all levels of their staff about CSR activities and the integration of social processes with business processes. Those involved with the undertaking of CSR activities will be provided with adequate training and re-orientation.

Under this programme, the project proponents will take-up following programmes for social and economic development of villages within 10 km of the project site. For this purpose, separate budget will be provided every year. For finalization of these schemes, proponent will interact with LSG. The schemes will be selected from the following broad areas –

- Health Services
- Social Development
- Infrastructure Development
- Education & Sports
- Self-Employment

CSR Cost Estimation

- CSR activities will be taken up in the Kothapetta village mainly contributing to education, health, training of women self-help groups and contribution to infrastructure etc., CSR budget is allocated as 2.5% of the profit.

CORPORATE ENVIRONMENT RESPONSIBILITY–

Allocation for Corporate Environment Responsibility (CER) shall be made as per Government of India, MoEF & CC Office Memorandum F.No.22-65/2017-IA.III, Dated: 01.05.2018.

As per para 6 (II) of the office memorandum, all the mines being a green field project & Capital Investment is \leq 100 crores, they shall contribute 2% of Capital Investment towards CER as per directions of EAC/SEAC and the total CER amount from the 3 proposed mines is Rs **Rs 15,00,000/-**.

TABLE 8.1 CER – ACTION PLAN

Code	CER
P1	Rs 5,00,000/-
P2	Rs 5,00,000/-
P3	Rs 5,00,000/-
Total	Rs 15,00,000/-

Source: Field survey conducted by FAE, consultation with project proponent

CHAPTER – 9: ENVIRONMENTAL COST BENEFIT ANALYSIS

Not Applicable, Since Environmental Cost Benefit Analysis not recommended at the Scoping stage.

CHAPTER - 10: ENVIRONMENTAL MANAGEMENT PLAN – P1

10.1 General

Environment Management Plan (EMP) aims at the preservation of ecological system by considering in-built pollution abatement facilities at the proposed site. Good practices of Environmental Management plan will ensure to keep all the environmental parameters of the project in respect of Ambient Air quality, Water quality, Socio – economic improvement standards.

Mitigation measures at the source level and an overall environment management plan at the study area are elicited so as to improve the supportive capacity of the receiving bodies. The EMP presented in this chapter discusses the administrative aspects of ensuring that mitigative measures are implemented and their effectiveness monitored after approval of the EIA.

10.2 Environmental Policy

The Project Proponent is committed to conduct all its operations and activities in an environmentally responsible manner and to continually improve environmental performance.

The Proponent **Sri M/s. Devaraajaa ‘M’ Sand (Thiru. D.Mathiazhagan- Managing Partner)** will

- Meet the requirements of all laws, acts, regulations, and standards relevant to its operations and activities.
- Allocate necessary resources to ensure the implementation of the environmental policy.
- Ensure that an effective closure strategy is in place at all stages of project development and that progressive reclamation is undertaken as early as possible to reduce potential long-term environmental and community impacts.
- Implement a program to train employees in general environmental issues and individual workplace environmental responsibilities.
- Implement monitoring programmes to provide early warning of any deficiency or unanticipated performance in environmental safeguards.
- Conduct periodic reviews to verify environmental performance and to continuously strive towards improvement.

Description of the Administration and Technical Setup –

The Environment Monitoring Cell discussed under Chapter 6 will ensure effective implementation of environment management plan and to ensure compliance of environmental statutory guidelines through Mine Management Level of each Proposed Quarry.

The said team will be responsible for:

- Monitoring of the water/ waste water quality, air quality and solid waste generated
- Analysis of the water and air samples collected through external laboratory

- Implementation and monitoring of the pollution control and protective measures/ devices which shall include financial estimation, ordering, installation of air pollution control equipment, waste water treatment plant, etc.
- Co-ordination of the environment related activities within the project as well as with outside agencies
- Collection of health statistics of the workers and population of the surrounding villages
- Green belt development
- Monitoring the progress of implementation of the environmental monitoring programme
- Compliance to statutory provisions, norms of State Pollution Control Board, Ministry of Environment and Forests and the conditions of the environmental clearance as well as the consents to establish and consents to operate.

10.3 Land Environment Management –

Land degradation is one of the major adverse impacts of opencast mining in the form of excavated voids and contamination of soil affects the viability of the soil resource.

Soil contamination then has a number of flow-on effects like, Inhibition of plant growth, and death of existing plants in contaminated areas and contamination of soil also has potential to impact on a surface water quality and groundwater resources.

TABLE 10.1: PROPOSED CONTROLS FOR LAND ENVIRONMENT

CONTROL	RESPONSIBILITY
Designing vehicle wash-down system so that all washed water is captured and passed through grease and oil separators.	Mines Manager
Re fueling will be carried out in a safe location, away from vehicle movement pathways	Mine Foreman & Mining Mate
Greenbelt development and its maintenance	Environment Officer
Garland drains with catch pits to be provided all around the project area to prevent run off affecting the surrounding lands.	Environment Officer
The periphery of Project area will be planted with thick plantation to arrest the fugitive dust, which will also act as acoustic barrier.	Mines Manager
Thick plantation using native flora species will be carried out on the top benches.	Mines Manager
There will be formation of a small surface water body in the mined-out area, which can be used for watering the greenbelt at the conceptual stages.	Environment Officer

Source: Proposed by FAE's & EIA Coordinator

10.4 Soil Management

Top Soil Management –

- There is topsoil no Topsoil

Overburden / Waste and Side Burden Management –

- The overburden in the form of Gravel. The Gravel will be directly loaded into tippers for the filling and levelling of lowlying areas, this will be done only after obtaining permission and paying necessary seigniorage fees to the Government.

TABLE 10.2: PROPOSED CONTROLS FOR SOIL MANAGEMENT

CONTROL	RESPONSIBILITY
Garland drains are to be paved around the quarry pit area to arrest possible wash off in the rainy seasons	Mines Manager
Surface run-off from the surface water via garland drains will be diverted to the mine pits	Mine Foreman & Mining Mate
Design haul roads and other access roads with drainage systems to minimize concentration of flow and erosion risk	Environment Officer
keeping records of mitigation of erosion events, to improve on management techniques	Environment Officer
A monitoring map with information including their GPS coordinates, erosion type, intensity, and the extent of the affected area, as well as existing control measures and assessment of their performance	Environment Officer
Empty sediment from sediment traps Maintain, repair or upgrade garland drain system	Environment Officer
Test soils for pH, EC, chloride, exchangeable cations, particle size and water holding capacity	Mines Manager

Source: Proposed by FAE's & EIA Coordinator

10.5 Water Management

In the proposed quarrying project, no process is involved for the effluent generation, only oil & grease from the machinery wash is anticipated and domestic sewage from mine office.

The quarrying operation is proposed upto a depth of 41m (1m gravel +40m Rough stone) the water table in the area is 76-82m below ground level, hence the proposed projects will not intersect the Ground water table during entire quarry period.

TABLE 10.3: PROPOSED CONTROLS FOR WATER ENVIRONMENT

CONTROL	RESPONSIBILITY
To maximize the reuse of pit water for water supply	Mines Foreman
Temporary and permanent garland drain will be constructed to contain the catchments of the mining area and to divert runoff from undisturbed areas through the mining areas	Mines Manager
Natural drains/nallahs/brooklets outside the project area should not be disturbed at any point of mining operations	Mines Manager
Ensure there is no process effluent generation or discharge from the project area into water bodies	Mines Foreman
Domestic sewage generated from the project area will be disposed in septic tank and soak pit system	Mines Foreman
Monthly or after rainfall, inspection for performance of water management structures and systems	Mines Manager
Conduct ground water and surface water monitoring for parameters specified by CPCB	Manager Mines

Source: Proposed by FAE's & EIA Coordinator

10.6 Air Quality Management

The proposed mining activities would result in the increase of particulate matter concentrations due to fugitive dust. Water sprinkling twice per day on the haul roads, approach roads in the vicinity would be undertaken and will be continued as there is possibility for dust generation due to truck mobility. It will be ensured that vehicles are properly maintained to comply with exhaust emission requirements.

TABLE 10.4: PROPOSED CONTROLS FOR AIR ENVIRONMENT

CONTROL	RESPONSIBILITY
Generation of dust during excavation is minimized by daily (twice) water sprinkling on working face and daily (twice) water sprinkling on haul road	Mines Manager
Wet drilling procedure /drills with dust extractor system to control dust generation during drilling at source itself is implemented	Mines Manager
Maintenance as per operator manual of the equipment and machinery in the mines to minimizing air pollution	Mines Manager
Ambient Air Quality Monitoring carried out in the project area and in surrounding villages to access the impact due to the mining activities and the efficacy of the adopted air pollution control measures	Mines Manager
Provision of Dust Mask to all workers	Mines Manager
Greenbelt development all along the periphery of the project area	Mines Manager

Source: Proposed by FAE's & EIA Coordinator

10.7 Noise Management

There will be intermittent noise levels due to vehicular movement, trucks loading, drilling and blasting and other allied activities. No mining activities are planned during night time.

TABLE 10.5: PROPOSED CONTROLS FOR NOISE ENVIRONMENT

CONTROL	RESPONSIBILITY
Development of thick greenbelt all along the Buffer Zone (7.5 Meters) of the project area to attenuate the noise and the same will be maintained	Mines Manager
Preventive maintenance of mining machinery and replacement of worn-out accessories to control noise generation	Mines Foreman
Deployment of mining equipment with an inbuilt mechanism to reduce noise	Mines Manager
Provision of earmuff/ ear plugs to workers working in noise prone zones in the mines	Mining Mate
Provision of effective silencers for mining machinery and transport vehicles	Mines Manager
Provision of sound proof AC operator cabins to HEMM	Mines Manager
Sharp drill bits are used to minimize noise from drilling	Mines Foreman
Controlled blasting technologies are adopted by using delay detonators to minimize noise from blasting	Mines Manager
Annual ambient noise level monitoring shall be carried out in the project area and in surrounding villages to access the impact due to the mining activities and the efficacy of the adopted noise control measures. Additional noise control measures will be adopted if required as per the observations during monitoring	Mines Manager
Reduce maximum instantaneous charge using delays while blasting	Mining Mate
Change the burden and spacing by altering the drilling pattern and/or delay layout, or altering the hole inclination	Mines Manager
Undertake noise or vibration monitoring	Mines Manager

Source: Proposed by FAE's & EIA Coordinator

10.8 Ground Vibration and Fly Rock Control

TABLE 10.6: PROPOSED CONTROLS FOR GROUND VIBRATIONS & FLY ROCK

CONTROL	RESPONSIBILITY
Controlled blasting using delay detonators will be carried out to maintain the PPV value (below 8Hz) well within the prescribed standards of DGMS	Mines Manager
Drilling and blasting will be carried under the supervision of qualified persons	Mines Manager
Proper stemming of holes should be carried out with statutory competent qualified blaster under the supervision of statutory mines manager to avoid any anomalies during blasting	Mines Manager
Suitable spacing and burden will be maintained to avoid misfire / fly rocks	Manager Mines
Number of blast holes will be restricted to control ground vibrations	Manager Mines
Blasting will be carried out only during noon time	Mining Mate
Undertake noise or vibration monitoring	Mines Manager
ensure blast holes are adequately stemmed for the depth of the hole and stemmed with suitable angular material	Mines Foreman

Source: Proposed by FAE's & EIA Coordinator

10.9 Biological Environment Management

The proponent will take all necessary steps to avoid the impact on the ecology of the area by adopting suitable management measures in the planning and implementation stage. During mining, thick plantation will be carried out around the project periphery, on safety barrier zone, on top benches of quarried out area etc.,

Following control measures are proposed for its management and will be the responsibility of the Mines Manager.

- Greenbelt development all along the safety barrier of the project area.
- It is also proposed to implement the greenbelt development programme and post plantation status will be regularly checked for every season.
- The main attributes that retard the survival of sapling is fugitive dust, this fugitive dust can be controlled by water sprinkling on the haul roads and installing a sprinkler unit near the newly planted area.
- Year wise greenbelt development will be recorded and monitored
 - Based on the area of plantation.
 - Period of plantation
 - Type of plantation
 - Spacing between the plants
 - Type of manuring and fertilizers and its periods
 - Lopping period, interval of watering
 - Survival rate
 - Density of plantation
- The ultimate reclamation planned leaves a congenial environment for development of flora & immigration of small fauna through green belt and water reservoir. The green belt and water reservoir developed within the Project at the end of mine life will attract the birds and animals towards the project area in the post mining period.

10.9.1 Green Belt Development Plan

About 1600nos. of saplings is proposed to be planted for the Mining plan period in safety barrier of applied mine lease area with survival rate 80%. The greenbelt development plan has been prepared keeping in view the land use changes that will occur due to mining operation in the area.

TABLE 10.7 PROPOSED GREENBELT ACTIVITIES FOR 10 YEAR PLAN PERIOD – P1

PROPOSAL FOR P1				
Year	No. of trees proposed to be planted	Survial %	Area to be planted	Name of the species
I	It is proposed to plant 2000 Nos of trees in the 1 st year	80%	Safety barrier, Un utilized areas and nearby village roads	Neem, Pongamia pinnata, Casuarina, etc

Source: Conceptual Plan of Approved Mining plan& proposed by FAE's & EIA Coordinator

The objectives of the greenbelt development plan are –

- Provide a green belt around the periphery of the quarry area to combat the dispersal of dust in the adjoining areas,
- Protect the erosion of the soil, Conserve moisture for increasing ground water recharging,
- Restore the ecology of the area, restore aesthetic beauty of the locality and meet the requirement of fodder, fuel and timber of the local community.

A well-planned Green Belt with multi rows (three tiers) preferably with long canopy leaves shall be developed with dense plantations around the boundary and haul roads to prevent air, dust noise propagation to undesired places and efforts will be taken for the enhancement of survival rate.

10.9.2 Species Recommended for Plantation

Following points have been considered while recommending the species for plantation:

- Creating of bio-diversity.
- Fast growing, thick canopy cover, perennial and evergreen large leaf area,
- Efficient in absorbing pollutants without major effects on natural growth

TABLE 10.8: RECOMMENDED SPECIES TO PLANT IN THE GREENBELT – P1

S.No	Botanical Name	Local Name	Importance
1.	Azadirachta indica	Neem, Vembu	Neem oil & neem products
2.	Tamarindus indica	Tamarind	Edible & Medicinal and other Uses
3.	Polyalthia longifolia	Nettilinkam	Tall and evergreen tree
4.	Borassus Flabellifer	Palmyra Palm	Tall Wind breaker tree and its fruits are edible

Source: Proposed by FAE's & EIA Coordinator

10.10 Occupational Safety & Health Management

Occupational safety and health are very closely related to productivity and good employer-employee relationship. The main factors of occupational health impact in quarries are fugitive dust and noise. Safety of employees during quarrying operation and maintenance of mining equipment will be taken care as per Mines Act 1952 and Rule 29 of Mines Rules 1955. To avoid any adverse effect on the health of workers due to dust, noise and vibration sufficient measures have been provided.

10.10.1 Medical Surveillance and Examinations –

- Identifying workers with conditions that may be aggravated by exposure to dust & noise and establishing baseline measures for determining changes in health.
- Evaluating the effect of noise on workers
- Enabling corrective actions to be taken when necessary
- Providing health education

The health status of workers in the mine shall be regularly monitored under an occupational surveillance program. Under this program, all the employees are subjected to a detail medical examination at the time of employment. The medical examination covers the following tests under mines act 1952.

- General Physical Examination and Blood Pressure
- X-ray Chest and ECG
- Sputum test
- Detailed Routine Blood and Urine examination

The medical histories of all employees will be maintained in a standard format annually. Thereafter, the employees will be subject to medical examination annually. The below tests keep upgrading the database of medical history of the employees.

TABLE 10.9: MEDICAL EXAMINATION SCHEDULE – P1

Sl. No	Activities	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
1	Initial Medical Examination (Mine Workers)					
A	Physical Check-up					
B	Psychological Test					
C	Audiometric Test					
D	Respiratory Test					
2	Periodical Medical Examination (Mine Workers)					
A	Physical Check – up					
B	Audiometric Test					
C	Eye Check – up					
D	Respiratory Test					
3	Medical Camp (Mine Workers & Nearby Villagers)					
4	Training (Mine Workers)					

Medical Follow ups: - Work force will be divided into three targeted groups age wise as follows: -		
Age Group	PME as per Mines Rules 1955	Special Examination
Less than 25 years	Once in a Three Years	In case of emergencies
Between 25 to 40 Years	Once in a Three Years	In case of emergencies
Above 40 Years	Once in a Three Years	In case of emergencies
Medical help on top priority immediately after diagnosis/ accident is the essence of preventive aspects.		

10.10.2 Proposed Occupational Health and Safety Measures –

- The mine site will have adequate drinking water supply so that workers do not get dehydrated.
- Lightweight and loose-fitting clothes having light colours will be preferred to wear.
- Noise exposure measurements will be taken to determine the need for noise control strategies.
- The personal protective equipment will be provided for mine workers.
- Supervisor will be instructed for reporting any problems with hearing protectors or noise control equipment.
- At noisy working activity, exposure time will be minimized.
- Dust generating sources will be identified and proper control measure will be adopted.
- Periodic medical examinations will be provided for all workers.
- Strict observance of the provisions of DGMS Acts, Rules and Regulations in respect of safety both by management and the workers.
- The width of road will be maintained more than thrice the width of the vehicle. A code of traffic rules will be implemented.
- In respect of contract work, safety code for contractors and workers will be implemented. They will be allowed to work under strict supervision of statutory person/officials only after they will impart training at vocational training centres. All personal protective equipment's will be provided to them.
- A safety committee meeting every month will be organized to discuss the safety of the mines and the persons employed.
- Celebration of annual mines safety week and environmental week in order to develop safety awareness and harmony amongst employees and co quarry owners.

FIGURE 10.1: PERSONAL PROTECTIVE EQUIPMENT TO THE MINE WORKERS – P1

10.10.3 Health and Safety Training Programme

The Proponents will provide special induction program along with machinery manufacturers for the operators and co-operators to run and maintain the machinery effectively and efficiently. The training program for the supervisors and office staffs will be arranged in the Group Vocational Training Centres in the State and engage Environmental Consultants to provide periodical training to all the employees to carry out the mining operation in and eco-friendly manner.

TABLE 10.10: LIST OF PERIODICAL TRAININGS PROPOSED FOR EMPLOYEES – P1

Course	Personnel	Frequency	Duration	Instruction
New-Employee Training	All new employees exposed to mine hazards	Once	One week	Employee rights Supervisor responsibilities Self-rescue Respiratory devices Transportation controls Communication systems Escape and emergency evacuation Ground control hazards Occupational health hazards Electrical hazards First aid Explosives
Task Training Like Drilling, Blasting, Stemming, safety, Slope stability, Dewatering, Haul road maintenance,	Employees assigned to new work tasks	Before new Assignments	Variable	Task-specific health & safety procedures and SOP for various mining activity. Supervised practice in assigned work tasks.
Refresher Training	All employees who received new-hire training	Yearly	One week	Required health and safety standards Transportation controls Communication systems Escape ways, emergency evacuations

				Fire warning Ground control hazards First aid Electrical hazards Accident prevention Explosives Respirator devices
Hazard Training	All employees exposed to mine hazards	Once	Variable	Hazard recognition and avoidance Emergency evacuation procedures Health standards Safety rules Respiratory devices

Source: Proposed by FAE's & EIA Coordinator as per DGMS Norms

10.10.4 Budgetary Provision for Environmental Management –

Adequate budgetary provision has been made by the Company for execution of Environmental Management Plan. The Table 10.11 gives overall investment on the environmental safeguards and recurring expenditure for successful monitoring and implementation of control measures.

TABLE 10.11: EMP BUDGET FOR PROPOSED PROJECT – P1

	Mitigation Measure	Provision for Implementation	Capital	Recurring
Air Environment	Compaction, gradation and drainage on both sides for Haulage Road	Rental Dozer & drainage construction on haul road @ Rs. 10,000/- per hectare; and yearly maintenance @ Rs. 10,000/- per hectare	40000	40000
	Fixed Water Sprinkling Arrangements + Water sprinkling by own water tankers	Fixed Sprinkler Installation and New Water Tanker Cost for Capital; and Water Sprinkling (thrice a day) Cost for recurring	800000	50000
	Muffle blasting – To control fly rocks during blasting	Blasting face will be covered with sand bags / steel mesh / old tyres / used conveyor belts	0	5000
	Wet drilling procedure / latest eco-friendly drill machine with separate dust extractor unit	Dust extractor @ Rs. 25,000/- per unit deployed as capital & @ Rs. 2500 per unit recurring cost for maintenance - 3 Units	125000	12500
	No overloading of trucks/tippers/tractors	Manual Monitoring through Security guard	0	5000
	Stone carrying trucks will be covered by tarpaulin	Monitoring if trucks will be covered by tarpaulin	0	10000
	Enforcing speed limits of 20 km/hr within ML area	Installation of Speed Governors @ Rs. 5000/- per Tipper/Dumper deployed - 3 Units	15000	750
	Regular monitoring of exhaust fumes as per RTO norms	Monitoring of Exhaust Fumes by Manual Labour	0	5000
	Regular sweeping and maintenance of approach roads for at least about 200 m from ML Area	Provision for 2 labours @ Rs.10,000/labour (Contractual) per Hectare	0	80000
	Installing wheel wash system near gate of quarry	Installation + Maintenance + Supervision	50000	20000
Noise Environment	Source of noise will be during operation of transportation vehicles, HEMM for this proper maintenance will be done at regular intervals.	Provision made in Operating Cost	0	0
	Oiling & greasing of Transport vehicles and HEMM at regular interval will be done	Provision made in Operating Cost	0	0
	Adequate silencers will be provided in all the diesel engines of vehicles.	Provision made in Operating Cost	0	0
	It will be ensured that all transportation vehicles carry a fitness certificate.	Provision made in Operating Cost	0	0
	Safety tools and implements that are required will be kept adequately near blasting site at the time of charging.	Provision made in OHS part	0	0

	Line Drilling all along the boundary to reduce the PPV from blasting activity and implementing controlled blasting.	Provision made in Operating Cost	0	0
	Proper warning system before blasting will be adopted and clearance of the area before blasting will be ensured.	Blowing Whistle by Mining Mate / Blaster / Compentent Person	0	0
	Provision for Portable blaster shed	Installation of Portable blasting shelter	50000	2000
	NONEL Blasting will be practiced to control Ground vibration and fly rocks	Rs. 30/- per 6 Tonnes of Blasted Material	0	1334749
Waste Management	Waste management (Spent Oil, Grease etc.,)	Provision for domestic waste collection and disposal through authorized agency	5000	20000
		Installation of dust bins	5000	2000
	Bio toilets will be made available outside mine lease on the land of owner itself	Provision made in Operating Cost	0	0
Mine Closure	1. Progressive Closure Activity - Surface Runoff managment	Provision for garland drain @ Rs. 10,000/- per Hectare with maintenance of Rs. 5,000/- per annum	40000	5000
	2. Progressive Closure Activity Barbed Wire Fencing to quarry area will be provisioned.	Per Hectare fencing Cost @ Rs. 2,00,000/- with Maintenance of Rs 10,000/- per annum	800000	10000
	3. Progressive Closure Activity Green belt development - 500 trees per one hectare - Proposal for 2000Trees - (840 Inside Lease Area & 1560 Outside Lease Area)	Site clearance, preparation of land, digging of pits / trenches, soil amendmets, transplantation of saplings @ 200 per plant (capital) for plantation inside the lease area and @ 30 per plant maintenance (recurring)	168000	25200
		Avenue Plantation @ 300 per plant (capital) for plantation outside the lease area and @ 30 per plant maintenance (recurring)	468000	46800
	4. Implementation of Final Mine Closure Activity as per Approved Mining Plan on Last Year	A few activities already covered progressive closure activities as greenbelt development, wire fencing, and garland drain.*For Final Closure Activities 15% of the proposed closure cost will be spent during the final mine closure stage - Last Year	107550	0
	5. Contribution towards Green Fund. As per TNMMCR 1959, Rule 35 A	The Contribution towards Green Funds @ 10% of Seigniorage fee are indicated as part of EMP Budge and not necessarily implemented in the Project Site	3028854	0
Implementation of EC, Mining	Size 6' X 5' with blue background and white letters as mentioned in MoM Appendix II by the SEAC TN	Fixed Display Board at the Quarry Entrance as permanent structure mentioning Environmental Conditions	10000	1000

Plan & DGMS Condition	Air, Water, Noise and Soil Quality Sampling every 6 Months for Compliance Report of EC Conditions	Submission of 2 Half Yearly Compliance - Lab Monitoring Report as per CPCB norms	0	50000
	Workers will be provided with Personal Protective Equipment's	Provision of PPE @ Rs. 4000/- per employee with recurring based on wear and tear (say, @ Rs. 1000/- per employee) - 21 Employees	84000	21000
	Health check-up for workers will be provisioned	IME & PME Health check up @ Rs. 1000/- per employee	0	21000
	First aid facility will be provided	Provision of 2 Kits per Hectare @ Rs. 2000/-	0	8000
	Mine will have safety precaution signages, boards.	Provision for signages and boards made	10000	2000
	No parking will be provided on the transport routes. Separate provision on the south side of the hill will be made for vehicles /HEMMs. Flaggers will be deployed for traffic management	Parking area with shelter and flags @ Rs. 50,000/- per hectare project and Rs. 10,000/- as maintenance cost	200000	10000
	Installation of CCTV cameras in the mines and mine entrance	Camera 4 Nos, DVR, Monitor with internet facility	30000	5000
	Implementation as per Mining Plan and ensure safe quarry working	Mines Manager (1 st Class / 2 nd Class / Mine Foreman) under regulation 34 / 34 (6) of MMR, 1961 and Mining Mate under regulation 116 of MMR,1961 @ 40,000/- for Manager & @ 25,000/- for Foreman / Mate	0	780000
CER	As per MoEF &CC OM 22-65/2017-IA.III Dated 25.02.2021	Detailed Description in following slides and Budget allocation is included as per MoeEF & CC OM	500000	0
TOTAL			3400000	2571999

In order to implement the environmental protection measures, an amount of Rs.34 lakhs as capital cost and recurring cost as Rs. 25.71 lakhs as recurring cost is proposed considering present market price considering present market scenario for the proposed project.

Year Wise Break Up	
1st Year	Rs. 59,71,999
2nd Year	Rs. 27,00,598.95
3rd Year	Rs. 28,35,628.898
4th Year	Rs. 29,77,410.342
5th Year	Rs. 32,33,830.859
Total	Rs. 177Lakshs

10.11 Conclusion

Various aspects of mining activities were considered and related impacts were evaluated. Considering all the possible ways to mitigate the environmental concerns Environmental Management Plan was prepared and fund has been allocated for the same. The EMP is dynamic, flexible and subjected to periodic review. For project where the major environmental impacts are associated, EMP will be under regular review. Senior Management responsible for the project will conduct review of EMP and its implementation to ensure that the EMP remains effective and appropriate. Thus, the proper steps will be taken to accomplish all the goals mentioned in the EMP and the project will bring the positive impact in the study area.

CHAPTER - 10: ENVIRONMENTAL MANAGEMENT PLAN – P2

10.1 General

Environment Management Plan (EMP) aims at the preservation of ecological system by considering in-built pollution abatement facilities at the proposed site. Good practices of Environmental Management plan will ensure to keep all the environmental parameters of the project in respect of Ambient Air quality, Water quality, Socio– economic improvement standards.

Mitigation measures at the source level and an overall environment management plan at the study area are elicited so as to improve the supportive capacity of the receiving bodies. The EMP presented in this chapter discusses the administrative aspects of ensuring that mitigative measures are implemented and their effectiveness monitored after approval of the EIA.

10.2 Environmental Policy

The Project Proponent is committed to conduct all its operations and activities in an environmentally responsible manner and to continually improve environmental performance.

The Proponent **Tmt.K.M. Vijaya** will –

- Allocate necessary resources to ensure the implementation of the environmental policy
- Meet the requirements of all laws, acts, regulations, and standards relevant to its operations and activities
- Implement a program to train employees in general environmental issues and individual workplace environmental responsibilities
- Ensure that an effective closure strategy is in place at all stages of project development and that progressive reclamation is undertaken as early as possible to reduce potential long-term environmental and community impacts
- Implement monitoring programmes to provide early warning of any deficiency or unanticipated performance in environmental safeguards
- Conduct periodic reviews to verify environmental performance and to continuously strive towards improvement

Description of the Administration and Technical Setup –

The Environment Monitoring Cell discussed under Chapter 6 will ensure effective implementation of environment management plan and to ensure compliance of environmental statutory guidelines through Mine Management Level of each Proposed Quarry.

The said team will be responsible for:

- Monitoring of the water/ waste water quality, air quality and solid waste generated
- Analysis of the water and air samples collected through external laboratory
- Implementation and monitoring of the pollution control and protective measures/ devices which shall include financial estimation, ordering, installation of air pollution control equipment, waste water treatment plant, etc.

- Co-ordination of the environment related activities within the project as well as with outside agencies
- Collection of health statistics of the workers and population of the surrounding villages
- Green belt development
- Monitoring the progress of implementation of the environmental monitoring programme
- Compliance to statutory provisions, norms of State Pollution Control Board, Ministry of Environment and Forests and the conditions of the environmental clearance as well as the consents to establish and consents to operate.

10.3 Land Environment Management –

Land degradation is one of the major adverse impacts of opencast mining in the form of excavated voids and contamination of soil affects the viability of the soil resource.

Soil contamination then has a number of flow-on effects like, Inhibition of plant growth, and death of existing plants in contaminated areas and contamination of soil also has potential to impact on a surface water quality and groundwater resources.

TABLE 10.1: PROPOSED CONTROLS FOR LAND ENVIRONMENT

CONTROL	RESPONSIBILITY
Designing vehicle wash-down system so that all washed water is captured and passed through grease and oil separators.	Mines Manager
Re fueling will be carried out in a safe location, away from vehicle movement pathways	Mine Foreman & Mining Mate
Greenbelt development and its maintenance	Environment Officer
Garland drains with catch pits to be provided all around the project area to prevent run off affecting the surrounding lands.	Environment Officer
The periphery of Project area will be planted with thick plantation to arrest the fugitive dust, which will also act as acoustic barrier.	Mines Manager
Thick plantation using native flora species will be carried out on the top benches.	Mines Manager
There will be formation of a small surface water body in the mined-out area, which can be used for watering the greenbelt at the conceptual stages.	Environment Officer

Source: Proposed by FAE's & EIA Coordinator

10.4 Soil Management

Top Soil Management –

- There is no topsoil.

Overburden / Waste and Side Burden Management –

- The overburden in the form of Gravel. The Gravel will be directly loaded into tippers for the filling and levelling of lowlying areas, this will be done only after obtaining permission and paying necessary seigniorage fees to the Government.

TABLE 10.2: PROPOSED CONTROLS FOR SOIL MANAGEMENT

CONTROL	RESPONSIBILITY
Garland drains are to be paved around the quarry pit area to arrest possible wash off in the rainy seasons	Mines Manager
Surface run-off from the surface water via garland drains will be diverted to the mine pits	Mine Foreman & Mining Mate
Design haul roads and other access roads with drainage systems to minimize concentration of flow and erosion risk	Environment Officer
keeping records of mitigation of erosion events, to improve on management techniques	Environment Officer
A monitoring map with information including their GPS coordinates, erosion type, intensity, and the extent of the affected area, as well as existing control measures and assessment of their performance	Environment Officer
Empty sediment from sediment traps Maintain, repair or upgrade garland drain system	Environment Officer
Test soils for pH, EC, chloride, exchangeable cations, particle size and water holding capacity	Mines Manager

Source: Proposed by FAE's & EIA Coordinator

10.5 Water Management

In the proposed quarrying project, no process is involved for the effluent generation, only oil & grease from the machinery wash is anticipated and domestic sewage from mine office.

The quarrying operation is restricted upto a depth 31m (1m Gravel +30m Rough stone) the water table in the area is 76-82m below ground level, hence the proposed projects will not intersect the Ground water table during entire quarry period.

TABLE 10.3: PROPOSED CONTROLS FOR WATER ENVIRONMENT

CONTROL	RESPONSIBILITY
To maximize the reuse of pit water for water supply	Mines Foreman
Temporary and permanent garland drain will be constructed to contain the catchments of the mining area and to divert runoff from undisturbed areas through the mining areas	Mines Manager
Natural drains/nallahs/brooklets outside the project area should not be disturbed at any point of mining operations	Mines Manager
Ensure there is no process effluent generation or discharge from the project area into water bodies	Mines Foreman
Domestic sewage generated from the project area will be disposed in septic tank and soak pit system	Mines Foreman
Monthly or after rainfall, inspection for performance of water management structures and systems	Mines Manager
Conduct ground water and surface water monitoring for parameters specified by CPCB	Manager Mines

Source: Proposed by FAE's & EIA Coordinator

10.6 Air Quality Management

The proposed mining activities would result in the increase of particulate matter concentrations due to fugitive dust. Water sprinkling twice per day on the haul roads, approach roads in the vicinity would be undertaken and will be continued as there is possibility for dust generation due to truck mobility. It will be ensured that vehicles are properly maintained to comply with exhaust emission requirements.

TABLE 10.4: PROPOSED CONTROLS FOR AIR ENVIRONMENT

CONTROL	RESPONSIBILITY
Generation of dust during excavation is minimized by daily (twice) water sprinkling on working face and daily (twice) water sprinkling on haul road	Mines Manager
Wet drilling procedure /drills with dust extractor system to control dust generation during drilling at source itself is implemented	Mines Manager
Maintenance as per operator manual of the equipment and machinery in the mines to minimizing air pollution	Mines Manager
Ambient Air Quality Monitoring carried out in the project area and in surrounding villages to access the impact due to the mining activities and the efficacy of the adopted air pollution control measures	Mines Manager
Provision of Dust Mask to all workers	Mines Manager
Greenbelt development all along the periphery of the project area	Mines Manager

Source: Proposed by FAE's & EIA Coordinator

10.7 Noise Management

There will be intermittent noise levels due to vehicular movement, trucks loading, drilling and blasting and other allied activities. No mining activities are planned during night time.

TABLE 10.5: PROPOSED CONTROLS FOR NOISE ENVIRONMENT

CONTROL	RESPONSIBILITY
Development of thick greenbelt all along the Buffer Zone (7.5 Meters) of the project area to attenuate the noise and the same will be maintained	Mines Manager
Preventive maintenance of mining machinery and replacement of worn-out accessories to control noise generation	Mines Foreman
Deployment of mining equipment with an inbuilt mechanism to reduce noise	Mines Manager
Provision of earmuff/ ear plugs to workers working in noise prone zones in the mines	Mining Mate
Provision of effective silencers for mining machinery and transport vehicles	Mines Manager
Provision of sound proof AC operator cabins to HEMM	Mines Manager
Sharp drill bits are used to minimize noise from drilling	Mines Foreman
Controlled blasting technologies are adopted by using delay detonators to minimize noise from blasting	Mines Manager
Annual ambient noise level monitoring shall be carried out in the project area and in surrounding villages to access the impact due to the mining activities and the efficacy of the adopted noise control measures. Additional noise control measures will be adopted if required as per the observations during monitoring	Mines Manager
Reduce maximum instantaneous charge using delays while blasting	Mining Mate
Change the burden and spacing by altering the drilling pattern and/or delay layout, or altering the hole inclination	Mines Manager
Undertake noise or vibration monitoring	Mines Manager

Source: Proposed by FAE's & EIA Coordinator

10.8 Ground Vibration and Fly Rock Control

TABLE 10.6: PROPOSED CONTROLS FOR GROUND VIBRATIONS & FLY ROCK

CONTROL	RESPONSIBILITY
Controlled blasting using delay detonators will be carried out to maintain the PPV value (below 8Hz) well within the prescribed standards of DGMS	Mines Manager
Drilling and blasting will be carried under the supervision of qualified persons	Mines Manager
Proper stemming of holes should be carried out with statutory competent qualified blaster under the supervision of statutory mines manager to avoid any anomalies during blasting	Mines Manager
Suitable spacing and burden will be maintained to avoid misfire / fly rocks	Manager Mines
Number of blast holes will be restricted to control ground vibrations	Manager Mines
Blasting will be carried out only during noon time	Mining Mate
Undertake noise or vibration monitoring	Mines Manager
ensure blast holes are adequately stemmed for the depth of the hole and stemmed with suitable angular material	Mines Foreman

Source: Proposed by FAE's & EIA Coordinator

10.9 Biological Environment Management

The proponent will take all necessary steps to avoid the impact on the ecology of the area by adopting suitable management measures in the planning and implementation stage. During mining, thick plantation will be carried out around the project periphery, on safety barrier zone, on top benches of quarried out area etc.,

Following control measures are proposed for its management and will be the responsibility of the Mines Manager.

- Greenbelt development all along the safety barrier of the project area
- It is also proposed to implement the greenbelt development programme and post plantation status will be regularly checked for every season.
- The main attributes that retard the survival of sapling is fugitive dust, this fugitive dust can be controlled by water sprinkling on the haul roads and installing a sprinkler unit near the newly planted area.
- Year wise greenbelt development will be recorded and monitored
 - Based on the area of plantation.
 - Period of plantation
 - Type of plantation
- Spacing between the plants
- Type of manuring and fertilizers and its periods
- Lopping period, interval of watering
- Survival rate
- Density of plantation
- The ultimate reclamation planned leaves a congenial environment for development of flora & immigration of small fauna through green belt and water reservoir. The green belt and water reservoir developed within the Project at the end of mine life will attract the birds and animals towards the project area in the post mining period.

10.9.1 Green Belt Development Plan

About 1600nos. of saplings is proposed to be planted for the Mining plan period in safety barrier of applied mine lease area with survival rate 80%. The greenbelt development plan has been prepared keeping in view the land use changes that will occur due to mining operation in the area.

TABLE 10.7 PROPOSED GREENBELT ACTIVITIES FOR 5 YEAR PLAN PERIOD – P2

PROPOSAL FOR P2			
It is proposed to plant 2000Nos of trees in the 1 st year	80%	Safety barrier, Unutilized area's and nearby village roads	Neem, Pongamia pinnata, Casuarina, etc.,

Source: Conceptual Plan of Approved Mining plan & proposed by FAE's & EIA Coordinator

The objectives of the greenbelt development plan are –

- Provide a green belt around the periphery of the quarry area to combat the dispersal of dust in the adjoining areas,
- Protect the erosion of the soil, Conserve moisture for increasing ground water recharging,
- Restore the ecology of the area, restore aesthetic beauty of the locality and meet the requirement of fodder, fuel and timber of the local community.

A well-planned Green Belt with multi rows (three tiers) preferably with long canopy leaves shall be developed with dense plantations around the boundary and haul roads to prevent air, dust noise propagation to undesired places and efforts will be taken for the enhancement of survival rate.

10.9.2 Species Recommended for Plantation

Following points have been considered while recommending the species for plantation:

- Creating of bio-diversity.
- Fast growing, thick canopy cover, perennial and evergreen large leaf area,
- Efficient in absorbing pollutants without major effects on natural growth

TABLE 10.8: RECOMMENDED SPECIES TO PLANT IN THE GREENBELT – P2

S.No	Botanical Name	Local Name	Importance
1	Azadirachta indica	Neem, Vembu	Neem oil & neem products
2	Tamarindus indica	Tamarind	Edible & Medicinal and other Uses
3	Polyalthia longifolia	Nettilinkam	Tall and evergreen tree
4	Borassus Flabellifer	Palmyra Palm	Tall Wind breaker tree and its fruits are edible

Source: Proposed by FAE's & EIA Coordinator

10.10 Occupational Safety & Health Management

Occupational safety and health are very closely related to productivity and good employer-employee relationship. The main factors of occupational health impact in quarries are fugitive dust and noise. Safety of employees during quarrying operation and maintenance of mining equipment will be taken care as per Mines Act 1952 and Rule 29 of Mines Rules 1955. To avoid any adverse effect on the health of workers due to dust, noise and vibration sufficient measures have been provided.

10.10.1 Medical Surveillance and Examinations –

- Identifying workers with conditions that may be aggravated by exposure to dust & noise and establishing baseline measures for determining changes in health.

- Evaluating the effect of noise on workers
- Enabling corrective actions to be taken when necessary
- Providing health education

The health status of workers in the mine shall be regularly monitored under an occupational surveillance program. Under this program, all the employees are subjected to a detail medical examination at the time of employment. The medical examination covers the following tests under mines act 1952.

- General Physical Examination and Blood Pressure
- X-ray Chest and ECG
- Sputum test
- Detailed Routine Blood and Urine examination

The medical histories of all employees will be maintained in a standard format annually. Thereafter, the employees will be subject to medical examination annually. The below tests keep upgrading the database of medical history of the employees.

TABLE 10.9: MEDICAL EXAMINATION SCHEDULE – P2

Sl.No	Activities	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
1	Initial Medical Examination (Mine Workers)					
A	Physical Check-up					
B	Psychological Test					
C	Audiometric Test					
D	Respiratory Test					
2	Periodical Medical Examination (Mine Workers)					
A	Physical Check - up					
B	Audiometric Test					
C	Eye Check - up					
D	Respiratory Test					
3	Medical Camp (Mine Workers & Nearby Villagers)					
4	Training (Mine Workers)					

Medical Follow ups:- Work force will be divided into three targeted groups age wise as follows:-		
Age Group	PME as per Mines Rules 1955	Special Examination
Less than 25 years	Once in a Three Years	In case of emergencies
Between 25 to 40 Years	Once in a Three Years	In case of emergencies
Above 40 Years	Once in a Three Years	In case of emergencies

Medical help on top priority immediately after diagnosis/ accident is the essence of preventive aspects.

10.10.2 Proposed Occupational Health and Safety Measures –

- The mine site will have adequate drinking water supply so that workers do not get dehydrated.
- Lightweight and loose-fitting clothes having light colours will be preferred to wear.
- Noise exposure measurements will be taken to determine the need for noise control strategies.
- The personal protective equipment will be provided for mine workers.
- Supervisor will be instructed for reporting any problems with hearing protectors or noise control equipment.
- At noisy working activity, exposure time will be minimized.
- Dust generating sources will be identified and proper control measure will be adopted.
- Periodic medical examinations will be provided for all workers.

- Strict observance of the provisions of DGMS Acts, Rules and Regulations in respect of safety both by management and the workers.
- The width of road will be maintained more than thrice the width of the vehicle. A code of traffic rules will be implemented.
- In respect of contract work, safety code for contractors and workers will be implemented. They will be allowed to work under strict supervision of statutory person/officials only after they will impart training at vocational training centres. All personal protective equipment's will be provided to them.
- A safety committee meeting every month will be organized to discuss the safety of the mines and the persons employed.
- Celebration of annual mines safety week and environmental week in order to develop safety awareness and harmony amongst employees and co quarry owners.

FIGURE 10.1: PERSONAL PROTECTIVE EQUIPMENT TO THE MINE WORKERS – P2



10.10.3 Health and Safety Training Programme

The Proponents will provide special induction program along with machinery manufacturers for the operators and co-operators to run and maintain the machinery effectively and efficiently. The training program for the supervisors and office staffs will be arranged in the Group Vocational Training Centres in the State and engage Environmental Consultants to provide periodical training to all the employees to carry out the mining operation in and eco-friendly manner.

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Task Training Like Drilling, Blasting, Stemming, safety, Slope stability, Dewatering, Haul Road maintenance,	Employees assigned to new work tasks	Before new Assignments	Variable	Task-specific health & safety procedures and SOP for various mining activity. Supervised practice in assigned work tasks.
Refresher Training	All employees who received new-hire training	Yearly	One week	Required health and safety standards Transportation controls Communication systems Escape ways, emergency evacuations Fire warning Ground control hazards First aid Electrical hazards Accident prevention Explosives Respirator devices
Hazard Training	All employees exposed to mine hazards	Once	Variable	Hazard recognition and avoidance Emergency evacuation procedures Health standards Safety rules Respiratory devices

Source: Proposed by FAE's & EIA Coordinator as per DGMS Norms

10.10.4 Budgetary Provision for Environmental Management –

Adequate budgetary provision has been made by the Company for execution of Environmental Management Plan. The Table 10.11 gives overall investment on the environmental safeguards and recurring expenditure for successful monitoring and implementation of control measures.

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	Regular sweeping and maintenance of approach roads for at least about 200 m from ML Area	Provision for 2 labours @ Rs.10,000/labour (Contractual) per Hectare	0	80000
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Noise Environment	Source of noise will be during operation of transportation vehicles, HEMM for this proper maintenance will be done at regular intervals.	Provision made in Operating Cost	0	0
	Oiling & greasing of Transport vehicles and HEMM at regular interval will be done	Provision made in Operating Cost	0	0
	Adequate silencers will be provided in all the diesel engines of vehicles.	Provision made in Operating Cost	0	0
	It will be ensured that all transportation vehicles carry a fitness certificate.	Provision made in Operating Cost	0	0
	Safety tools and implements that are required will be kept adequately near blasting site at the time of charging.	Provision made in OHS part	0	0
	Line Drilling all along the boundary to reduce the PPV from blasting activity and implementing controlled blasting.	Provision made in Operating Cost	0	0

	Proper warning system before blasting will be adopted and clearance of the area before blasting will be ensured.	Blowing Whistle by Mining Mate / Blaster / Competent Person	0	0
	Provision for Portable blaster shed	Installation of Portable blasting shelter	50000	2000
	NONEL Blasting will be practiced to control Ground vibration and fly rocks	Rs. 30/- per 6 Tonnes of Blasted Material	0	2062333
Waste Management	Waste management (Spent Oil, Grease etc.,)	Provision for domestic waste collection and disposal through authorized agency	5000	20000
		Installation of dust bins	5000	2000
	Bio toilets will be made available outside mine lease on the land of owner itself	Provision made in Operating Cost	0	0
Mine Closure	1. Progressive Closure Activity - Surface Runoff managment	Provision for garland drain @ Rs. 10,000/- per Hectare with maintenance of Rs. 5,000/- per annum	40000	5000
	2. Progressive Closure Activity Barbed Wire Fencing to quarry area will be provisioned.	Per Hectare fencing Cost @ Rs. 2,00,000/- with Maintenance of Rs 10,000/- per annum	800000	10000
	3. Progressive Closure Activity Green belt development - 500 trees per one hectare - Proposal for 2000Trees - (630 Inside Lease Area & 575 Outside Lease Area)	Site clearance, preparation of land, digging of pits / trenches, soil amendments, transplantation of saplings @ 200 per plant (capital) for plantation inside the lease area and @ 30 per plant maintenance (recurring)	126000	18900
		Avenue Plantation @ 300 per plant (capital) for plantation outside the lease area and @ 30 per plant maintenance (recurring)	172500	17250
	4. Implementation of Final Mine Closure Activity as per Approved Mining Plan on Last Year	A few activities already covered progressive closure activities as greenbelt development, wire fencing, and garland drain. *For Final Closure Activities 15% of the proposed closure cost will be spent during the final mine closure stage - Last Year	90975	0
	5. Contribution towards Green Fund. As per TNMMCR 1959, Rule 35 A	The Contribution towards Green Funds @ 10% of Seigniorage fee are indicated as part of EMP Budge and not necessarily implemented in the Project Site	4679910	0
Implementation of EC, Mining Plan & DGMS Condition	Size 6' X 5' with blue background and white letters as mentioned in MoM Appendix II by the SEAC TN	Fixed Display Board at the Quarry Entrance as permanent structure mentioning Environmental Conditions	10000	1000
	Air, Water, Noise and Soil Quality Sampling every 6 Months for Compliance Report of EC Conditions	Submission of 2 Half Yearly Compliance - Lab Monitoring Report as per CPCB norms	0	50000

	Workers will be provided with Personal Protective Equipment's	Provision of PPE @ Rs. 4000/- per employee with recurring based on wear and tear (say, @ Rs. 1000/- per employee) - 21 Employees	84000	21000
	Health check up for workers will be provisioned	IME & PME Health check up @ Rs. 1000/- per employee	0	21000
	First aid facility will be provided	Provision of 2 Kits per Hectare @ Rs. 2000/-	0	8000
	Mine will have safety precaution signages, boards.	Provision for signages and boards made	10000	2000
	No parking will be provided on the transport routes. Separate provision on the south side of the hill will be made for vehicles /HEMMs. Flaggers will be deployed for traffic management	Parking area with shelter and flags @ Rs. 50,000/- per hectare project and Rs. 10,000/- as maintenance cost	200000	10000
	Installation of CCTV cameras in the mines and mine entrance	Camera 4 Nos, DVR, Monitor with internet facility	30000	5000
	Implementation as per Mining Plan and ensure safe quarry working	Mines Manager (1 st Class / 2 nd Class / Mine Foreman) under regulation 34 / 34 (6) of MMR, 1961 and Mining Mate under regulation 116 of MMR,1961 @ 40,000/- for Manager & @ 25,000/- for Foreman / Mate	0	780000
CER	As per MoEF &CC OM 22-65/2017-IA.III Dated 25.02.2021	Detailed Description in following slides and Budget allocation is included as per MoeEF & CC OM	500000	0
TOTAL			3062500	3263733

In order to implement the environmental protection measures, an amount of Rs.30.62 lakhs as capital cost and recurring cost as Rs. 32.63 lakhs as recurring cost is proposed considering present market price considering present market scenario for the proposed project.

Year Wise Break Up	
1st Year	Rs 6,32,6233
2nd Year	Rs 34,26,919.65
3rd Year	Rs 35,98,265.633
4th Year	Rs 37,78,178.914
5th Year	Rs 40,58,062.86
Total	Rs.212 Lakhs

10.11 Conclusion

Various aspects of mining activities were considered and related impacts were evaluated. Considering all the possible ways to mitigate the environmental concerns Environmental Management Plan was prepared and fund has been allocated for the same. The EMP is dynamic, flexible and subjected to periodic review. For project where the major environmental impacts are associated, EMP will be under regular review. Senior Management responsible for the project will conduct a review of EMP and its implementation to ensure that the EMP remains effective and appropriate. Thus, the proper steps will be taken to accomplish all the goals mentioned in the EMP and the project will bring the positive impact in the study area.

CHAPTER - 10: ENVIRONMENTAL MANAGEMENT PLAN – P3

10.1 General

Environment Management Plan (EMP) aims at the preservation of ecological system by considering in-built pollution abatement facilities at the proposed site. Good practices of Environmental Management plan will ensure to keep all the environmental parameters of the project in respect of Ambient Air quality, Water quality, Socio– economic improvement standards.

Mitigation measures at the source level and an overall environment management plan at the study area are elicited so as to improve the supportive capacity of the receiving bodies. The EMP presented in this chapter discusses the administrative aspects of ensuring that mitigative measures are implemented and their effectiveness monitored after approval of the EIA.

10.2 Environmental Policy

The Project Proponent is committed to conduct all its operations and activities in an environmentally responsible manner and to continually improve environmental performance.

The Proponent **M/s. A.M. Quality Stone** will –

- Allocate necessary resources to ensure the implementation of the environmental policy
- Meet the requirements of all laws, acts, regulations, and standards relevant to its operations and activities
- Implement a program to train employees in general environmental issues and individual workplace environmental responsibilities
- Ensure that an effective closure strategy is in place at all stages of project development and that progressive reclamation is undertaken as early as possible to reduce potential long-term environmental and community impacts
- Implement monitoring programmes to provide early warning of any deficiency or unanticipated performance in environmental safeguards
- Conduct periodic reviews to verify environmental performance and to continuously strive towards improvement

Description of the Administration and Technical Setup –

The Environment Monitoring Cell discussed under Chapter 6 will ensure effective implementation of environment management plan and to ensure compliance of environmental statutory guidelines through Mine Management Level of each Proposed Quarry.

The said team will be responsible for:

- Monitoring of the water/ waste water quality, air quality and solid waste generated
- Analysis of the water and air samples collected through external laboratory
- Implementation and monitoring of the pollution control and protective measures/ devices which shall include financial estimation, ordering, installation of air pollution control equipment, waste water treatment plant, etc.

- Co-ordination of the environment related activities within the project as well as with outside agencies
- Collection of health statistics of the workers and population of the surrounding villages
- Green belt development
- Monitoring the progress of implementation of the environmental monitoring programme
- Compliance to statutory provisions, norms of State Pollution Control Board, Ministry of Environment and Forests and the conditions of the environmental clearance as well as the consents to establish and consents to operate.

10.3 Land Environment Management –

Land degradation is one of the major adverse impacts of opencast mining in the form of excavated voids and contamination of soil affects the viability of the soil resource.

Soil contamination then has a number of flow-on effects like, Inhibition of plant growth, and death of existing plants in contaminated areas and contamination of soil also has potential to impact on a surface water quality and groundwater resources.

TABLE 10.1: PROPOSED CONTROLS FOR LAND ENVIRONMENT

CONTROL	RESPONSIBILITY
Designing vehicle wash-down system so that all washed water is captured and passed through grease and oil separators.	Mines Manager
Re fueling will be carried out in a safe location, away from vehicle movement pathways	Mine Foreman & Mining Mate
Greenbelt development and its maintenance	Environment Officer
Garland drains with catch pits to be provided all around the project area to prevent run off affecting the surrounding lands.	Environment Officer
The periphery of Project area will be planted with thick plantation to arrest the fugitive dust, which will also act as acoustic barrier.	Mines Manager
Thick plantation using native flora species will be carried out on the top benches.	Mines Manager
There will be formation of a small surface water body in the mined out area, which can be used for watering the greenbelt at the conceptual stages.	Environment Officer

Source: Proposed by FAE's & EIA Coordinator

10.4 Soil Management

Top Soil Management

- The thickness of topsoil in this area is 1.0m and the total volume of Topsoil will be 8706m³.

Disposal of Overburden

- The overburden in the form of Topsoil is **8,706m³** up to depth 1m for during this lease period. Topsoil formation will be removed and dumped at all side boundary barrier of the lease area. It will be utilized for afforestation and road low lying areas.

TABLE 10.2: PROPOSED CONTROLS FOR SOIL MANAGEMENT

CONTROL	RESPONSIBILITY
Garland drains are to be paved around the quarry pit area to arrest possible wash off in the rainy seasons	Mines Manager
Surface run-off from the surface water via garland drains will be diverted to the mine pits	Mine Foreman & Mining Mate
Design haul roads and other access roads with drainage systems to minimize concentration of flow and erosion risk	Environment Officer
keeping records of mitigation of erosion events, to improve on management techniques	Environment Officer
A monitoring map with information including their GPS coordinates, erosion type, intensity, and the extent of the affected area, as well as existing control measures and assessment of their performance	Environment Officer
Empty sediment from sediment traps Maintain, repair or upgrade garland drain system	Environment Officer
Test soils for pH, EC, chloride, exchangeable cations, particle size and water holding capacity	Mines Manager

Source: Proposed by FAE's & EIA Coordinator

10.5 Water Management

In the proposed quarrying project, no process is involved for the effluent generation, only oil & grease from the machinery wash is anticipated and domestic sewage from mine office.

The quarrying operation is restricted upto a depth 45m (1m Topsoil +44m Rough stone) the water table in the area is 67 below ground level, hence the proposed projects will not intersect the Ground water table during entire quarry period.

TABLE 10.3: PROPOSED CONTROLS FOR WATER ENVIRONMENT

CONTROL	RESPONSIBILITY
To maximize the reuse of pit water for water supply	Mines Foreman
Temporary and permanent garland drain will be constructed to contain the catchments of the mining area and to divert runoff from undisturbed areas through the mining areas	Mines Manager
Natural drains/nallahs/brooklets outside the project area should not be disturbed at any point of mining operations	Mines Manager
Ensure there is no process effluent generation or discharge from the project area into water bodies	Mines Foreman
Domestic sewage generated from the project area will be disposed in septic tank and soak pit system	Mines Foreman
Monthly or after rainfall, inspection for performance of water management structures and systems	Mines Manager
Conduct ground water and surface water monitoring for parameters specified by CPCB	Manager Mines

Source: Proposed by FAE's & EIA Coordinator

10.6 Air Quality Management

The proposed mining activities would result in the increase of particulate matter concentrations due to fugitive dust. Water sprinkling twice per day on the haul roads, approach roads in the vicinity would be undertaken

and will be continued as there is possibility for dust generation due to truck mobility. It will be ensured that vehicles are properly maintained to comply with exhaust emission requirements.

TABLE 10.4: PROPOSED CONTROLS FOR AIR ENVIRONMENT

CONTROL	RESPONSIBILITY
Generation of dust during excavation is minimized by daily (twice) water sprinkling on working face and daily (twice) water sprinkling on haul road	Mines Manager
Wet drilling procedure /drills with dust extractor system to control dust generation during drilling at source itself is implemented	Mines Manager
Maintenance as per operator manual of the equipment and machinery in the mines to minimizing air pollution	Mines Manager
Ambient Air Quality Monitoring carried out in the project area and in surrounding villages to assess the impact due to the mining activities and the efficacy of the adopted air pollution control measures	Mines Manager
Provision of Dust Mask to all workers	Mines Manager
Greenbelt development all along the periphery of the project area	Mines Manager

Source: Proposed by FAE's & EIA Coordinator

10.7 Noise Management

There will be intermittent noise levels due to vehicular movement, trucks loading, drilling and blasting and other allied activities. No mining activities are planned during night time.

TABLE 10.5: PROPOSED CONTROLS FOR NOISE ENVIRONMENT

CONTROL	RESPONSIBILITY
Development of thick greenbelt all along the Buffer Zone (7.5 Meters) of the project area to attenuate the noise and the same will be maintained	Mines Manager
Preventive maintenance of mining machinery and replacement of worn-out accessories to control noise generation	Mines Foreman
Deployment of mining equipment with an inbuilt mechanism to reduce noise	Mines Manager
Provision of earmuff/ ear plugs to workers working in noise prone zones in the mines	Mining Mate
Provision of effective silencers for mining machinery and transport vehicles	Mines Manager
Provision of sound proof AC operator cabins to HEMM	Mines Manager
Sharp drill bits are used to minimize noise from drilling	Mines Foreman
Controlled blasting technologies are adopted by using delay detonators to minimize noise from blasting	Mines Manager
Annual ambient noise level monitoring shall be carried out in the project area and in surrounding villages to assess the impact due to the mining activities and the efficacy of the adopted noise control measures. Additional noise control measures will be adopted if required as per the observations during monitoring	Mines Manager
Reduce maximum instantaneous charge using delays while blasting	Mining Mate
Change the burden and spacing by altering the drilling pattern and/or delay layout, or altering the hole inclination	Mines Manager
Undertake noise or vibration monitoring	Mines Manager

Source: Proposed by FAE's & EIA Coordinator

10.8 Ground Vibration and Fly Rock Control

TABLE 10.6: PROPOSED CONTROLS FOR GROUND VIBRATIONS & FLY ROCK

CONTROL	RESPONSIBILITY
Controlled blasting using delay detonators will be carried out to maintain the PPV value (below 8Hz) well within the prescribed standards of DGMS	Mines Manager
Drilling and blasting will be carried under the supervision of qualified persons	Mines Manager
Proper stemming of holes should be carried out with statutory competent qualified blaster under the supervision of statutory mines manager to avoid any anomalies during blasting	Mines Manager
Suitable spacing and burden will be maintained to avoid misfire / fly rocks	Manager Mines
Number of blast holes will be restricted to control ground vibrations	Manager Mines
Blasting will be carried out only during noon time	Mining Mate
Undertake noise or vibration monitoring	Mines Manager
ensure blast holes are adequately stemmed for the depth of the hole and stemmed with suitable angular material	Mines Foreman

Source: Proposed by FAE's & EIA Coordinator

10.9 Biological Environment Management

The proponent will take all necessary steps to avoid the impact on the ecology of the area by adopting suitable management measures in the planning and implementation stage. During mining, thick plantation will be carried out around the project periphery, on safety barrier zone, on top benches of quarried out area etc.,

Following control measures are proposed for its management and will be the responsibility of the Mines Manager.

- Greenbelt development all along the safety barrier of the project area
- It is also proposed to implement the greenbelt development programme and post plantation status will be regularly checked for every season.
- The main attributes that retard the survival of sapling is fugitive dust, this fugitive dust can be controlled by water sprinkling on the haul roads and installing a sprinkler unit near the newly planted area.
- Year wise greenbelt development will be recorded and monitored
 - Based on the area of plantation.
 - Period of plantation
 - Type of plantation
- Spacing between the plants
- Type of manuring and fertilizers and its periods
- Lopping period, interval of watering
- Survival rate
- Density of plantation
- The ultimate reclamation planned leaves a congenial environment for development of flora & immigration of small fauna through green belt and water reservoir. The green belt and water reservoir developed within the Project at the end of mine life will attract the birds and animals towards the project area in the post mining period.

10.9.1 Green Belt Development Plan

About 1900 nos. of saplings is proposed to be planted for the Mining plan period in safety barrier of applied mine lease area with survival rate 80%. The greenbelt development plan has been prepared keeping in view the land use changes that will occur due to mining operation in the area.

TABLE 10.7 PROPOSED GREENBELT ACTIVITIES FOR 5 YEAR PLAN PERIOD – P3

PROPOSAL FOR -P3			
It is proposed to plant 2400Nos of trees in the 1 st year	80%	Safety barrier, Unutilized area's and nearby village roads	Neem, Pongamia pinnata, Casuarina, etc.,

Source: Conceptual Plan of Approved Mining plan & proposed by FAE's & EIA Coordinator

The objectives of the greenbelt development plan are –

- Provide a green belt around the periphery of the quarry area to combat the dispersal of dust in the adjoining areas,
- Protect the erosion of the soil, Conserve moisture for increasing ground water recharging,
- Restore the ecology of the area, restore aesthetic beauty of the locality and meet the requirement of fodder, fuel and timber of the local community.

A well-planned Green Belt with multi rows (three tiers) preferably with long canopy leaves shall be developed with dense plantations around the boundary and haul roads to prevent air, dust noise propagation to undesired places and efforts will be taken for the enhancement of survival rate.

10.9.2 Species Recommended for Plantation

Following points have been considered while recommending the species for plantation:

- Creating of bio-diversity.
- Fast growing, thick canopy cover, perennial and evergreen large leaf area,
- Efficient in absorbing pollutants without major effects on natural growth

TABLE 10.8: RECOMMENDED SPECIES TO PLANT IN THE GREENBELT – P3

S.No	Botanical Name	Local Name	Importance
1	Azadirachta indica	Neem, Vembu	Neem oil & neem products
2	Tamarindus indica	Tamarind	Edible & Medicinal and other Uses
3	Polyalthia longifolia	Nettilinkam	Tall and evergreen tree
4	Borassus Flabellifer	Palmyra Palm	Tall Wind breaker tree and its fruits are edible

Source: Proposed by FAE's & EIA Coordinator

10.10 Occupational Safety & Health Management

Occupational safety and health are very closely related to productivity and good employer-employee relationship. The main factors of occupational health impact in quarries are fugitive dust and noise. Safety of employees during quarrying operation and maintenance of mining equipment will be taken care as per Mines Act 1952 and Rule 29 of Mines Rules 1955. To avoid any adverse effect on the health of workers due to dust, noise and vibration sufficient measures have been provided.

10.10.1 Medical Surveillance and Examinations –

- Identifying workers with conditions that may be aggravated by exposure to dust & noise and establishing baseline measures for determining changes in health.

- Evaluating the effect of noise on workers
- Enabling corrective actions to be taken when necessary
- Providing health education

The health status of workers in the mine shall be regularly monitored under an occupational surveillance program. Under this program, all the employees are subjected to a detail medical examination at the time of employment. The medical examination covers the following tests under mines act 1952.

- General Physical Examination and Blood Pressure
- X-ray Chest and ECG
- Sputum test
- Detailed Routine Blood and Urine examination

The medical histories of all employees will be maintained in a standard format annually. Thereafter, the employees will be subject to medical examination annually. The below tests keep upgrading the database of medical history of the employees.

TABLE 10.9: MEDICAL EXAMINATION SCHEDULE – P3

Sl.No	Activities	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
1	Initial Medical Examination (Mine Workers)					
A	Physical Check-up					
B	Psychological Test					
C	Audiometric Test					
D	Respiratory Test					
2	Periodical Medical Examination (Mine Workers)					
A	Physical Check - up					
B	Audiometric Test					
C	Eye Check - up					
D	Respiratory Test					
3	Medical Camp (Mine Workers & Nearby Villagers)					
4	Training (Mine Workers)					

Medical Follow ups:- Work force will be divided into three targeted groups age wise as follows:-		
Age Group	PME as per Mines Rules 1955	Special Examination
Less than 25 years	Once in a Three Years	In case of emergencies
Between 25 to 40 Years	Once in a Three Years	In case of emergencies
Above 40 Years	Once in a Three Years	In case of emergencies

Medical help on top priority immediately after diagnosis/ accident is the essence of preventive aspects.

10.10.2 Proposed Occupational Health and Safety Measures –

- The mine site will have adequate drinking water supply so that workers do not get dehydrated.
- Lightweight and loose-fitting clothes having light colours will be preferred to wear.
- Noise exposure measurements will be taken to determine the need for noise control strategies.
- The personal protective equipment will be provided for mine workers.
- Supervisor will be instructed for reporting any problems with hearing protectors or noise control equipment.
- At noisy working activity, exposure time will be minimized.
- Dust generating sources will be identified and proper control measure will be adopted.
- Periodic medical examinations will be provided for all workers.

- Strict observance of the provisions of DGMS Acts, Rules and Regulations in respect of safety both by management and the workers.
- The width of road will be maintained more than thrice the width of the vehicle. A code of traffic rules will be implemented.
- In respect of contract work, safety code for contractors and workers will be implemented. They will be allowed to work under strict supervision of statutory person/officials only after they will impart training at vocational training centres. All personal protective equipment's will be provided to them.
- A safety committee meeting every month will be organized to discuss the safety of the mines and the persons employed.
- Celebration of annual mines safety week and environmental week in order to develop safety awareness and harmony amongst employees and co quarry owners.

FIGURE 10.1: PERSONAL PROTECTIVE EQUIPMENT TO THE MINE WORKERS – P3



10.10.3 Health and Safety Training Programme

The Proponents will provide special induction program along with machinery manufacturers for the operators and co-operators to run and maintain the machinery effectively and efficiently. The training program for the supervisors and office staffs will be arranged in the Group Vocational Training Centres in the State and engage Environmental Consultants to provide periodical training to all the employees to carry out the mining operation in and eco-friendly manner.

TABLE 10.10: LIST OF PERIODICAL TRAININGS PROPOSED FOR EMPLOYEES – P3

Course	Personnel	Frequency	Duration	Instruction
New-Employee Training	All new employees exposed to mine hazards	Once	One week	Employee rights Supervisor responsibilities Self-rescue Respiratory devices Transportation controls Communication systems Escape and emergency evacuation

				Ground control hazards Occupational health hazards Electrical hazards First aid Explosives
Task Training Like Drilling, Blasting, Stemming, safety, Slope stability, Dewatering, Haul Road maintenance,	Employees assigned to new work tasks	Before new Assignments	Variable	Task-specific health & safety procedures and SOP for various mining activity. Supervised practice in assigned work tasks.
Refresher Training	All employees who received new-hire training	Yearly	One week	Required health and safety standards Transportation controls Communication systems Escape ways, emergency evacuations Fire warning Ground control hazards First aid Electrical hazards Accident prevention Explosives Respirator devices
Hazard Training	All employees exposed to mine hazards	Once	Variable	Hazard recognition and avoidance Emergency evacuation procedures Health standards Safety rules Respiratory devices

Source: Proposed by FAE's & EIA Coordinator as per DGMS Norms

10.10.4 Budgetary Provision for Environmental Management –

Adequate budgetary provision has been made by the Company for execution of Environmental Management Plan. The Table 10.11 gives overall investment on the environmental safeguards and recurring expenditure for successful monitoring and implementation of control measures.

TABLE 10.11: EMP BUDGET FOR PROPOSED PROJECT – P3

	Mitigation Measure	Provision for Implementation	Capital	Recurring
Air Environment	Compaction, gradation and drainage on both sides for Haulage Road	Rental Dozer & drainage construction on haul road @ Rs. 10,000/- per hectare; and yearly maintenance @ Rs. 10,000/- per hectare	47490	47490
	Fixed Water Sprinkling Arrangements + Water sprinkling by own water tankers	Fixed Sprinkler Installation and New Water Tanker Cost for Capital; and Water Sprinkling (thrice a day) Cost for recurring	800000	50000
	Muffle blasting – To control fly rocks during blasting	Blasting face will be covered with sand bags / steel mesh / old tyres / used conveyor belts	0	5000
	Wet drilling procedure / latest eco-friendly drill machine with separate dust extractor unit	Dust extractor @ Rs. 25,000/- per unit deployed as capital & @ Rs. 2500 per unit recurring cost for maintenance - 3 Units	100000	10000
	No overloading of trucks/tippers/tractors	Manual Monitoring through Security guard	0	5000
	Stone carrying trucks will be covered by tarpaulin	Monitoring if trucks will be covered by tarpaulin	0	10000
	Enforcing speed limits of 20 km/hr within ML area	Installation of Speed Governors @ Rs. 5000/- per Tipper/Dumper deployed - 3 Units	15000	750
	Regular monitoring of exhaust fumes as per RTO norms	Monitoring of Exhaust Fumes by Manual Labour	0	5000
	Regular sweeping and maintenance of approach roads for at least about 200 m from ML Area	Provision for 2 labours @ Rs.10,000/labour (Contractual) per Hectare	0	94980
	Installing wheel wash system near gate of quarry	Installation + Maintenance + Supervision	50000	20000
Noise Environment	Source of noise will be during operation of transportation vehicles, HEMM for this proper maintenance will be done at regular intervals.	Provision made in Operating Cost	0	0
	Oiling & greasing of Transport vehicles and HEMM at regular interval will be done	Provision made in Operating Cost	0	0
	Adequate silencers will be provided in all the diesel engines of vehicles.	Provision made in Operating Cost	0	0
	It will be ensured that all transportation vehicles carry a fitness certificate.	Provision made in Operating Cost	0	0
	Safety tools and implements that are required will be kept adequately near blasting site at the time of charging.	Provision made in OHS part	0	0
	Line Drilling all along the boundary to reduce the PPV from blasting activity and implementing controlled blasting.	Provision made in Operating Cost	0	0

	Proper warning system before blasting will be adopted and clearance of the area before blasting will be ensured.	Blowing Whistle by Mining Mate / Blaster / Competent Person	0	0
	Provision for Portable blaster shed	Installation of Portable blasting shelter	50000	2000
	NONEL Blasting will be practiced to control Ground vibration and fly rocks	Rs. 30/- per 6 Tonnes of Blasted Material	0	1252992
Waste Management	Waste management (Spent Oil, Grease etc.,)	Provision for domestic waste collection and disposal through authorized agency	5000	20000
		Installation of dust bins	5000	2000
	Bio toilets will be made available outside mine lease on the land of owner itself	Provision made in Operating Cost	0	0
Mine Closure	1. Progressive Closure Activity - Surface Runoff management	Provision for garland drain @ Rs. 10,000/- per Hectare with maintenance of Rs. 5,000/- per annum	47490	5000
	2. Progressive Closure Activity Barbed Wire Fencing to quarry area will be provisioned.	Per Hectare fencing Cost @ Rs. 2,00,000/- with Maintenance of Rs 10,000/- per annum	949800	10000
	3. Progressive Closure Activity Green belt development - 500 trees per one hectare - Proposal for 2400Trees - (850 Inside Lease Area & 1550 Outside Lease Area)	Site clearance, preparation of land, digging of pits / trenches, soil amendments, transplantation of saplings @ 200 per plant (capital) for plantation inside the lease area and @ 30 per plant maintenance (recurring)	170000	25500
		Avenue Plantation @ 300 per plant (capital) for plantation outside the lease area and @ 30 per plant maintenance (recurring)	465000	46500
	4. Implementation of Final Mine Closure Activity as per Approved Mining Plan on Last Year	A few activities already covered progressive closure activities as greenbelt development, wire fencing, and garland drain.*For Final Closure Activities 15% of the proposed closure cost will be spent during the final mine closure stage - Last Year	110250	0
	5. Contribution towards Green Fund. As per TNMMCR 1959, Rule 35 A	The Contribution towards Green Funds @ 10% of Seigniorage fee are indicated as part of EMP Budge and not necessarily implemented in the Project Site	2843328	0
Implementation of EC, Mining Plan & DGMS Condition	Size 6' X 5' with blue background and white letters as mentioned in MoM Appendix II by the SEAC TN	Fixed Display Board at the Quarry Entrance as permanent structure mentioning Environmental Conditions	10000	1000
	Air, Water, Noise and Soil Quality Sampling every 6 Months for Compliance Report of EC Conditions	Submission of 2 Half Yearly Compliance - Lab Monitoring Report as per CPCB norms	0	50000
	Workers will be provided with Personal Protective Equipment's	Provision of PPE @ Rs. 4000/- per employee with recurring based on wear and tear (say, @ Rs. 1000/- per employee) - 18 Employees	72000	18000

	Health check up for workers will be provisioned	IME & PME Health check up @ Rs. 1000/- per employee	0	18000
	First aid facility will be provided	Provision of 2 Kits per Hectare @ Rs. 2000/-	0	9498
	Mine will have safety precaution signages, boards.	Provision for signages and boards made	10000	2000
	No parking will be provided on the transport routes. Separate provision on the south side of the hill will be made for vehicles /HEMMs. Flaggers will be deployed for traffic management	Parking area with shelter and flags @ Rs. 50,000/- per hectare project and Rs. 10,000/- as maintenance cost	237450	10000
	Installation of CCTV cameras in the mines and mine entrance	Camera 4 Nos, DVR, Monitor with internet facility	30000	5000
	Implementation as per Mining Plan and ensure safe quarry working	Mines Manager (1 st Class / 2 nd Class / Mine Foreman) under regulation 34 / 34 (6) of MMR, 1961 and Mining Mate under regulation 116 of MMR,1961 @ 40,000/- for Manager & @ 25,000/- for Foreman / Mate	0	780000
CER	As per MoEF &CC OM 22-65/2017-IA.III Dated 25.02.2021	Detailed Description in following slides and Budget allocation is included as per MoeEF & CC OM	500000	0
TOTAL			3564230	2505710

In order to implement the environmental protection measures, an amount of Rs.35.64 lakhs as capital cost and recurring cost as Rs. 25.05 lakhs as recurring cost is proposed considering present market price considering present market scenario for the proposed project.

Year Wise Break Up	
1st Year	Rs.60,69940
2nd Year	Rs.26,30,995.5
3rd Year	Rs.27,62,545.275
4th Year	Rs.29,00,672.539
5th Year	Rs.31,55,956.166
Total	Rs.175 Lakhs

10.11 Conclusion

Various aspects of mining activities were considered and related impacts were evaluated. Considering all the possible ways to mitigate the environmental concerns Environmental Management Plan was prepared and fund has been allocated for the same. The EMP is dynamic, flexible and subjected to periodic review. For project where the major environmental impacts are associated, EMP will be under regular review. Senior Management responsible for the project will conduct a review of EMP and its implementation to ensure that the EMP remains effective and appropriate. Thus, the proper steps will be taken to accomplish all the goals mentioned in the EMP and the project will bring the positive impact in the study area.

CHAPTER – 11: SUMMARY AND CONCLUSIONS

Kothapetta Rough Stone Cluster Quarries (Extent 16.44.9 ha) falls under “B” category as per MoEF & CC Notification (S.O. 3977 (E)).

Now, as per Order Dated: 04.09.2018 & 13.09.2018 passed by Hon'ble National Green Tribunal, New Delhi in O.A. No. 173 of 2018 & O.A. No, 186 of 2016 and MoEF & CC Office Memorandum F. No. L-11011/175/2018-IA-II (M) Dated: 12.12.2018 clarified the requirement for EIA, EMP and therefore, Public Consultation for all areas from 5 to 25 ha falling in Category B-1 and appraised by SEAC/ SEIAA as well as for cluster situation.

A detailed Draft EIA/ EMP Report is prepared for public and other stakeholders' suggestions and a Final EIA/ EMP Report will be prepared based on the outcome of Public Consultation.

Environmental monitoring and audit mechanism have been recommended before and after commencement of the project, where necessary, to verify the accuracy of the EIA predictions and the effectiveness of recommended mitigation measures.

The main scope of the EIA study is to quantify the cumulative impact in the study area due to cluster quarries and formulate the effective mitigation measures for each individual leases. A detailed account of the emission sources, emissions control equipment, background Air quality levels, Meteorological measurements, Dispersion model and all other aspects of pollution like effluent discharge, Dust generation etc., have been discussed in this report. The baseline monitoring study has been carried out during the months **Oct 2023 to Dec 2023** for various environmental components so as to assess the anticipated impacts of the cluster quarry projects on the environment and suitable mitigation measures for likely adverse impacts due to the proposed project is suggested individually for the respective proposed project under Chapter 10.

The project proponent ensures to obtain necessary clearances and quarrying will be carried out as per rules and regulations. The Mining activity will be carried out in a phased manner as per the approved Scheme of mining plan after obtaining EC, CTO from TNPCB, execution of lease deed and obtaining DGMS Permission and working will be carried out under the supervision of Competent Persons employed.

Overall, the EIA/EMP report has predicted that the project will comply with all environment standards and legislation after commencement of the project and operational stage mitigation measures are implemented.

Mining operations has positive impact on environment and socio economy such as landscape improvement, water as by-product, economy development and better public services, providing and supply of Rough Stone quarry as per market demand.

Sustainable and modern mining leads us to see positive impact of mining operation and providing consistent employment for nearly 60 people directly in the cluster and indirectly around 100 people.

As discussed, it is safe to say that the proposed quarries are not likely to cause any significant impact to the ecology of the area, as adequate preventive measures will be adopted to keep the various pollutants within the permissible limits. Green belt development around the area will also be taken up as an effective pollution mitigate technique, as well as to serve as biological indicators for the pollutants released from the Kothapetta Rough Stone Cluster quarries (Extent: 12.74.9 ha).

CHAPTER 12: DISCLOSURE OF CONSULTANTS

The Project Proponent's –

1. **M/s. Sri Devaraajaa 'M'Sand**
2. **Tmt.K.M.Vijaya**
3. **M/s. A.M. Quality Stone**

have engaged M/s Geo Exploration and Mining Solutions, an Accredited Organization under Quality Council of India – National Accreditation Board for Education & Training, New Delhi, for carrying out the EIA Study as per the ToR Issued.

Name and address of the consultancy:

GEO EXPLORATION AND MINING SOLUTIONS

No 17, Advaita Ashram Road,

Alagapuram, Salem – 636 004

Tamil Nadu, India

Email: infogeoexploration@gmail.com

Web: **www.gemssalem.com**

Phone: 0427 2431989.

The Accredited Experts and associated members who were engaged for this EIA study as given below –

Sl.No.	Name of the expert	In house/ Empanelled	EIA Coordinator		FAE	
			Sector	Category	Sector	Category
1	Dr. M. Ifthikhar Ahmed	In-house	1	A	WP GEO SC	B A A
2	Dr. P. Thangaraju	In-house	-	-	HG GEO	A A
3	Mr. A. Jagannathan	In-house	-	-	AP NV SHW	B A B
4	Mr. N. Senthilkumar	Empanelled	38 28	B B	AQ WP RH	B B A
5	Mrs. Jisha parameswaran	In-house	-	-	SW	B
6	Mr. Govindasamy	In-house	-	-	WP	B
7	Mrs. K. Anitha	In-house	-	-	SE	A
8	Mrs. Amirtham	In-house	-	-	EB	B
9	Mr. Alagappa Moses	Empanelled	-	-	EB	A
10	Mr. A. Allimuthu	In-house	-	-	LU	B
11	Mr. S. Pavel	Empanelled	-	-	RH	B
12	Mr. J. R. Vikram Krishna	Empanelled	-	-	SHW RH	A A

Abbreviations	
EC	EIA Coordinator
AEC	Associate EIA Coordinator
FAE	Functional Area Expert
FAA	Functional Area Associates
TM	Team Member
GEO	Geology
WP	Water pollution monitoring, prevention and control
AP	Air pollution monitoring, prevention and control
LU	Land Use
AQ	Meteorology, air quality modeling, and prediction
EB	Ecology and bio-diversity
NV	Noise and vibration
SE	Socio economics
HG	Hydrology, ground water and water conservation
SC	Soil conservation
RH	Risk assessment and hazard management
SHW	Solid and hazardous wastes
MSW	Municipal Solid Wastes
ISW	Industrial Solid Wastes
HW	Hazardous Wastes

DECLARATION BY EXPERTS CONTRIBUTING TO THE EIA/EMP

Declaration by experts contributing to the EIA/EMP for Rough Stone Cluster Quarries over an Extent of 16.44.9ha in Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu State. It is also certified that information furnished in the above EIA study are true and correct to the best of our knowledge.

I, hereby, certify that I was a part of the EIA team in the following capacity that developed the EIA/EMP Report.

Name: **Dr. M. Ifthikhar Ahmed**

Designation: **EIA Coordinator**

Date & Signature:




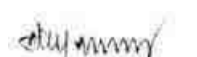

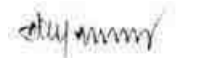






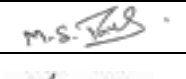
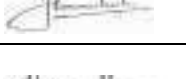
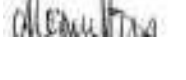


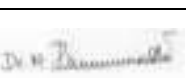


Period of Involvement: **January 2022 to till date**

Associated Team Member with EIA Coordinator:

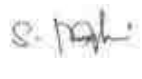
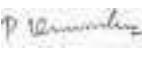
1. **Mr. S. Nagamani**
2. **Mr. Viswanathan**
3. **Mr. Santhoshkumar**
4. **Mr. S. Ilavarasan**





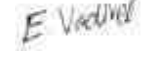

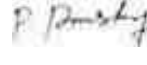

FUNCTIONAL AREA EXPERTS ENGAGED IN THE PROJECT

Sl. No.	Functional Area	Involvement	Name of the Expert/s	Signature
1	AP	<ul style="list-style-type: none"> ▪ Identification of different sources of air pollution due to the proposed mine activity ▪ Prediction of air pollution and propose mitigation measures / control measures 	Mr. A. Jagannathan	
2	WP	<ul style="list-style-type: none"> ▪ Suggesting water treatment systems, drainage facilities ▪ Evaluating probable impacts of effluent/waste water discharges into the receiving environment/water bodies and suggesting control measures. 	Dr. M. Ifthikhar Ahmed	
			Mr. N. Senthilkumar	
3	HG	<ul style="list-style-type: none"> ▪ Interpretation of ground water table and predict impact and propose mitigation measures. ▪ Analysis and description of aquifer Characteristics 	Dr. P. Thangaraju	
4	GEO	<ul style="list-style-type: none"> ▪ Field Survey for assessing the regional and local geology of the area. ▪ Preparation of mineral and geological maps. ▪ Geology and Geo morphological analysis/description and Stratigraphy/Lithology. 	Dr. M. Ifthikhar Ahmed	
			Dr. P. Thangaraju	
5	SE	<ul style="list-style-type: none"> ▪ Revision in secondary data as per Census of India, 2011. 	Mrs. K. Anitha	

		<ul style="list-style-type: none"> Impact Assessment & Preventive Management Plan Corporate Environment Responsibility. 		
6	EB	<ul style="list-style-type: none"> Collection of Baseline data of Flora and Fauna. Identification of species labelled as Rare, Endangered and threatened as per IUCN list. Impact of the project on flora and fauna. Suggesting species for greenbelt development. 	Mrs. Amirtham	
			Mr. Alagappa Moses	
7	RH	<ul style="list-style-type: none"> Identification of hazards and hazardous substances Risks and consequences analysis Vulnerability assessment Preparation of Emergency Preparedness Plan Management plan for safety. 	Mr. N. Senthilkumar	
			Mr. S. Pavel	
			Mr. J. R. Vikram Krishna	
8	LU	<ul style="list-style-type: none"> Construction of Land use Map Impact of project on surrounding land use Suggesting post closure sustainable land use and mitigative measures. 	Mr. A. Allimuthu	
9	NV	<ul style="list-style-type: none"> Identify impacts due to noise and vibrations Suggesting appropriate mitigation measures for EMP. 	Mr. A. Jagannathan	
10	AQ	<ul style="list-style-type: none"> Identifying different source of emissions and propose predictions of incremental GLC using AERMOD. Recommending mitigations measures for EMP 	Mr. N. Senthilkumar	
11	SC	<ul style="list-style-type: none"> Assessing the impact on soil environment and proposed mitigation measures for soil conservation 	Dr. M. Ifthikhar Ahmed	
12	SHW	<ul style="list-style-type: none"> Identify source of generation of non-hazardous solid waste and hazardous waste. Suggesting measures for minimization of generation of waste and how it can be reused or recycled. 	Mr. A. Jagannathan	
			Mr. J. R. Vikram Krishna	

LIST OF TEAM MEMBERS ENGAGED IN THIS PROJECT

Sl.No.	Name	Functional Area	Involvement	Signature
1	Mr. S. Nagamani	AP; GEO; AQ	<ul style="list-style-type: none"> Site Visit with FAE Provide inputs & Assisting FAE with sources of Air Pollution, its impact and suggest control measures Provide inputs on Geological Aspects Analyse & provide inputs and assist FAE with meteorological data, emission estimation, AERMOD modelling and suggesting control measures 	
2	Mr. Viswanathan	AP; WP; LU	<ul style="list-style-type: none"> Site Visit with FAE Provide inputs & Assisting FAE with sources of Air Pollution, its impact and suggest control measures Assisting FAE on sources of water pollution, its impacts and suggest control measures Assisting FAE in preparation of land use maps 	

3	Mr. Santhoshkumar	GEO; SC	<ul style="list-style-type: none"> ▪ Site Visit with FAE ▪ Provide inputs on Geological Aspects ▪ Assist in Resources & Reserve Calculation and preparation of Production Plan & Conceptual Plan ▪ Provide inputs & Assisting FAE with soil conservation methods and identifying impacts 	
4	Mr. Umamahesvaran	GEO	<ul style="list-style-type: none"> ▪ Site Visit with FAE ▪ Provide inputs on Geological Aspects ▪ Assist in Resources & Reserve Calculation and preparation of Production Plan & Conceptual Plan 	
5	Mr. A. Allimuthu	SE	<ul style="list-style-type: none"> ▪ Site Visit with FAE ▪ Assist FAE with collection of data's ▪ Provide inputs by analysing primary and secondary data 	
6	Mr. S. Ilavarasan	LU; SC	<ul style="list-style-type: none"> ▪ Site Visit with FAE ▪ Assisting FAE in preparation of land use maps ▪ Provide inputs & Assisting FAE with soil conservation methods and identifying impacts 	
7	Mr. E. Vadivel	HG	<ul style="list-style-type: none"> ▪ Site Visit with FAE ▪ Assist FAE & provide inputs on aquifer characteristics, ground water level/table ▪ Assist with methods of ground water recharge and conduct pump test, flow rate 	
8	Mr. D. Dinesh	NV	<ul style="list-style-type: none"> ▪ Site Visit with FAE ▪ Assist FAE and provide inputs on impacts due to proposed mine activity and suggest mitigation measures ▪ Assist FAE with prediction modelling 	
9	Mr. Panneer Selvam	EB	<ul style="list-style-type: none"> ▪ Site Visit with FAE ▪ Assist FAE with collection of baseline data ▪ Provide inputs and assist with labelling of Flora and Fauna 	
10	Mrs. Nathiya	EB	<ul style="list-style-type: none"> ▪ Site Visit with FAE ▪ Assist FAE with collection of baseline data ▪ Provide inputs and assist with labelling of Flora and Fauna 	

DECLARATION BY THE HEAD OF THE ACCREDITED CONSULTANT ORGANIZATION

I, Dr. M. Ifthikhar Ahmed, Managing Partner, Geo Exploration and Mining Solutions, hereby, confirm that the above-mentioned Functional Area Experts and Team Members prepared the EIA/EMP for Rough Stone Cluster Quarries over an Extent of 16.44.9 ha in Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu State. It is also certified that information furnished in the EIA study are true and correct to the best of our knowledge.

Signature& Date:



Name:

Dr. M. Ifthikhar Ahmed

Designation:

Managing Partner

Name of the EIA Consultant Organization:

M/s. Geo Exploration and Mining Solutions

NABET Certificate No & Issue Date:

NABET/EIA/2225/RA 0276 Dated: 20-02-2023

Validity:

Valid till 06.8.2025

ANNEXURE

KOTHAPETTA ROUGH STONE CLUSTER QUARRIES

Kothapetta Villages,
Krishnagiri Taluk,
Krishnagiri District

CLUSTER EXTENT: 16.44.9 Ha

ToR obtained

Lr.No. SEIAA-TN/F.No.10244/2023/SEAC/ToR-1681/2024 Dated:14.02.2024-P1

Lr.No. SEIAA-TN/F.No.10248/SEAC/ToR-1676/2024 Dated:14.02.2024- P2

ToR Identification No: TO23B0108TN5558418N dated 13.03.2024 -P3

Code	P1	P2	P3
Project Location	M/s. Sri Devaraajaa M. Sand S.F No. 78/1A(P), 78/1B(P) Extent: 4.00.0 KothapettaVillage, Krishnagiri Taluk, Krishnagiri (DT)	Tmt.K.M.Vijaya S.F. No..78/1B (P), Extent: 4.00.0 ha KothapettaVillage, Krishnagiri Taluk , Krishnagiri (DT)	M/s.A.M Quality Stone S.F. No.. 87/1B1B & 87/1B2B, Extent: 4.74.9 ha KothapettaVillage, Krishnagiri Taluk , Krishnagiri (DT)

LIST OF ANNEXURES

ANNEXURES	DESCRIPTION	PAGE NOS
P1- M/s. Sri Devaraajaa M. Sand	COPY OF TERMS OF REFERENCE	1A-24A
	COPY OF 500M RADIUS QUARRIES DETAILS AND EXISTING PIT LETTER	25A-29A
	COPY OF 300m & VAO ATTESTATION LETTER	30A-31A
	COPY OF MINING PLAN APPROVED LETTER	32A-35A
	COPY OF APPROVED MINING PLAN WITH PLATES	36A-181A
	COPY OF CERTIFIED COMPLIANCE REPORT	182A-245A
P2- Tmt.K.M.Vijaya	COPY OF TERMS OF REFERENCE	246A-270A
	COPY OF 500M RADIUS QUARRIES DETAILS LETTER	271A-273A
	COPY 300m AND VAO ATTESTATION LETTER	274A-275A
	COPY OF MINING PLAN APPROVED LETTER	276A-279A
	COPY OF APPROVED MINING PLAN WITH PLATES	280A-426A
	COPY OF CERTIFIED COMPLIANCE REPORT	427A-484A
	COPY OF HYDROGEOLOGICAL REPORT	485A-495A
	COPY OF EXPLOSIVE LETTER	496A-501A
	COPY OF TERMS OF REFERENCE	502A-515A
	COPY OF 500M RADIUS QUARRIES DETAILS LETTER	516A-518A
	COPY 300m AND VAO ATTESTATION LETTER	519A-520A

<p style="text-align: center;">P3- M/s. A.M. Quality Stone</p>	COPY OF MINING PLAN APPROVED LETTER	521A-523A
	COPY OF APPROVED MINING PLAN WITH PLATES	524A-594A
	COPY OF POLLUTION LETTER	595A-600A
	COPY OF HYDROGEOLOGICAL REPORT	601A-623A
	COPY OF EXPLOSIVE LETTER	624A-629A
	COPY OF DFO LETTER	630A-633A
<p style="text-align: center;">E1 M/S. Ma Quality Stone,</p>	COPY OF ENVIRONMENTAL CLEARANCE	634A-665A
	COPY OF BASE LINE MONITORING DATA	666A-707A
	COPY OF CONSULTANT ACCREDITATION CERTIFICATE	708A



THIRU. A.R. RAHUL NADH, I.A.S.,
MEMBER SECRETARY

STATE LEVEL ENVIRONMENT IMPACT
ASSESSMENT AUTHORITY-TAMILNADU

3rd Floor, Panagal Manligai,
No.1, Jeemis Road, Saidapet,
Chennai - 600 015,
Phone No. 044-24359973
Fax No. 044-24359975

TERMS OF REFERENCE (ToR)

Lr.No.SEIAA-TN/F.No.10244/2023/SEAC/ToR-1681/2024 Dated:14.02.2024.

To

M/s. Sri Devarajaa M Sand
D.No.58B Gandhi Nagar,
Krishnagiri Town,
Krishnagiri District -635 001.

Sir / Madam,

Sub: SEIAA, Tamil Nadu – Terms of Reference with public Hearing (ToR) for the Proposed Rough stone Quarry over an extent of 4.00.0Ha at SF.No. 78/1A (P) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu by M/s. Sri Devarajaa M Sand - under project category – “B1” and Schedule S.No.1 (a) – ToR issued along with Public Hearing - preparation of EIA report – Regarding.

- Ref:**
1. Online proposal No: SIA/TN/MIN/430407/2023, dated:23.05.2023.
 2. Your application submitted for Terms of Reference dated:26.07.2023.
 3. Minutes of the 407th SEAC meeting held on 07.09.2023.
 4. Reply by the project proponent dated:14.11.2023.
 5. Minutes of the 430th SEAC meeting held on 14.12.2023.
 6. Minutes of the 439th SEAC meeting held on 10.01.2024.
 7. Minutes of the 696th SEIAA meeting held on 14.02.2024.

Kindly refer to your proposal submitted to the State Level Impact Assessment Authority for Terms of Reference.

MEMBER SECRETARY
SEIAA-TN

The proponent, M/s. Sri Devarajaa M Sand has submitted application for Terms of Reference (ToR) in Form-I, Pre- Feasibility report for the Proposed Rough stone Quarry over an extent of 4.00.0Ha at SF.No. 78/1A (P) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu.

Discussion by SEAC and the Remarks:-

Proposed Rough stone Quarry over an extent of 4.00.0Ha at SF.No. 78/1A (P) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu by M/s. Sri Devarajaa M Sand - For Terms of Reference. (SIA/TN/MIN/430407/2023, Dated:23.05.2023)

Earlier, the proposal was placed in the 407th SEAC Meeting held on 07.09.2023. The details of the project furnished by the proponent are given on the website (parivesh.nic.in).

The SEAC noted the following:

1. The Project Proponent, M/s. Sri Devarajaa M Sand has applied for Terms of Reference for the Proposed Rough stone Quarry over an extent of 4.00.0Ha at SF.No. 78/1A (P) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu.
2. The project/activity is covered under Category "B1" of Item 1(a) " Mining of mineral of the Schedule to the EIA Notification, 2006.
3. As per the mining plan the lease period is for 5 years, The mining plan is for the period of five years & the production should not exceed 4.87,698m³ of rough stone & 799m³ of Gravel with an ultimate depth of mining is 41m (1m Gravel + 40m Rough stone). The annual peak production is 1,19,857m³ of rough stone & 799m³ of Gravel.
4. Earlier, the PP has obtained Environmental Clearance from DEIAA vide Lr. No. 35/DEIAA-KGI/Ec.No.27/2018/Mines, Dt:27.02.2018.
5. The PP has furnished CCR vide EP/12.1/2023-24/SEIAA/65/TN/967 dated 09.08.2023.

Based on the details furnished by the Project Proponent, the SEAC directed the PP to submit the details of last date of mining carried out at the project site validated by the concerned AD (Mines), Department of Geology & Mining.

Again, the proposal was placed in 430th SEAC meeting held on 14.12.2023. The PP requested additional time to produce the details. Hence SEAC decided to defer the proposal.

Now the proposal was placed in 439th meeting of SEAC held on 10.01.2024. The Project proponent has made a presentation along with clarification for the above shortcomings observed by the SEAC. The EIA Co-ordinator stated that, the latest OM dated 03.11.2023 is issued as a clarification of 28.04.2023, and hence the above query is not applicable.



MEMBER SECRETARY
SEIAA-TN

Based on the presentation made by the proponent, SEAC decided to recommend for grant of Terms of Reference (ToR) with Public Hearing, subject to the following ToRs, and subject to the standard conditions as per the Annexure I of this minute, in addition to the standard terms of reference for EIA study for non-coal mining projects and details issued by the MOEF & CC to be included in EIA/EMP Report:

1. The PP shall submit the 'Action Plan' on the issues raised during the Public Hearing with budgetary provisions for the same.
2. The PP shall submit the Comprehensive EIA with detailed mitigation measures including the controlled blasting measures for reducing the impacts due to the blasting operation air pollution and water pollution, etc on the surrounding structures existing within 1 km of the proposed quarry.
3. The PP shall exhibit the action plan for carrying out the quarrying activities systematically and scientifically keeping the structures belonging to the owner that exist within 300 m distance.
4. The PP shall submit a 'Conceptual Mining Plan' indicating the accessible ramp from the surface to the pit bottom keeping the benches intact for the dimension as stipulated in the Approved Mining Plan.
5. The PP shall submit the nature of buildings/structures, occupants, and their profession, etc located within 500 m radius of the proposed quarry.
6. The project proponent shall furnish Certified Compliance Report (CCR) obtained from IRO(SZ), MoEF&CC and with mitigation measures along with the budgetary allocation for the non-compliance stated therein.
7. The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building, number of residents, their profession and income, etc.
8. The PP shall furnish the ownership details of the physical structures located near the proposed mine lease area, number of workers, time period of working etc
9. If the existing depth of quarry has already reached 30 m, for the safety of the persons employed in the quarry, the PP shall carry out the scientific studies and to furnish the report with assessing the slope stability of the working benches and existing quarry walls for evaluating the slope



MEMBER SECRETARY
SEIAA-TN

stabilization & protective measures while designing the proposed benches, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRM/Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg. Surathkal, and Anna University Chennai-CEG Campus. A copy of such scientific study report shall be submitted to the SEIAA, MoEF, TNPCB, AD/Mines-DGM and DMS, Chennai as a part of Environmental Compliance without any deviation.

Annexure - I

1. In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following:
 - (i) Original pit dimension
 - (ii) Quantity achieved Vs EC Approved Quantity
 - (iii) Balance Quantity as per Mineable Reserve calculated.
 - (iv) Mined out Depth as on date Vs EC Permitted depth
 - (v) Details of illegal/illicit mining
 - (vi) Violation in the quarry during the past working.
 - (vii) Quantity of material mined out outside the mine lease area
 - (viii) Condition of Safety zone/benches
 - (ix) Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m.
2. Details of habitations around the proposed mining area and latest VAO certificate regarding the location of habitations within 300m radius from the periphery of the site.
3. The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building, number of residents, their profession and income, etc.
4. The PP shall submit a detailed hydrological report indicating the impact of proposed quarrying operations on the waterbodies like lake, water tanks, etc are located within 1 km of the proposed quarry.



MEMBER SECRETARY
SEIAA-TN

5. The Proponent shall carry out Bio diversity study through reputed Institution and the same shall be included in EIA Report.
6. The DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., up to a radius of 25 km from the proposed site.
7. In the case of proposed lease in an existing (or old) quarry where the benches are not formed (or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall the PP shall carry out the scientific studies to assess the slope stability of the working benches to be constructed and existing quarry wall, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRM/Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus. The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining the EC.
8. However, in case of the fresh/virgin quarries, the Proponent shall submit a conceptual 'Slope Stability Plan' for the proposed quarry during the appraisal while obtaining the EC, when the depth of the working is extended beyond 30 m below ground level.
9. The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/I Class mines manager appointed by the proponent.
10. The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site.
11. The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidences.
12. If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines,
13. What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?
14. Quantity of minerals mined out.



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- Highest production achieved in any one year.
 - Detail of approved depth of mining.
 - Actual depth of the mining achieved earlier.
 - Name of the person already mined in that leases area.
 - If EC and CTO already obtained, the copy of the same shall be submitted.
 - Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.
15. All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/Topo sheet, topographic sheet, geomorphology, lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
16. The PP shall carry out Drone video survey covering the cluster, green belt, fencing, etc.,
17. The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.
18. The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justifications, the anticipated impacts of the mining operations on the surrounding environment, and the remedial measures for the same.
19. The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of the Mines Act 1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.
20. The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of groundwater pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds, etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided.



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21. The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality & flora/fauna including traffic/vehicular movement study.
22. The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of soil health, biodiversity, air pollution, water pollution, climate change and flood control & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.
23. Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.
24. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
25. Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be provided.
26. Proximity to Areas declared as 'Critically Polluted' (or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered.
27. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
28. Impact on local transport infrastructure due to the Project should be indicated.
29. A tree survey study shall be carried out (nos., name of the species, age, diameter etc..) both within the mining lease applied area & 300m buffer zone and its management during mining activity.
30. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.



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31. As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study, wherever possible.
32. The purpose of Green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix-I in consultation with the DFO, State Agriculture University. The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.
33. Taller/one year old Saplings raised in appropriate size of bags, preferably ecofriendly bags should be planted as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner.
34. A Disaster management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.
35. A Risk Assessment and management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.
36. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.
37. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
38. The Socio-economic studies should be carried out within a 5 km buffer zone from the mining activity. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
39. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.



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40. Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
41. If any quarrying operations were carried out in the proposed quarrying site for which now the EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF&CC, Regional Office, Chennai (or) the concerned DEE/TNPCB.
42. The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.
43. Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the Environment (Protection) Act, 1986.

Appendix -I

List of Native Trees Suggested for Planting

1. *Aegle marmelos*-Vilvam
2. *Adenanthera pavonina*-Manjadi
3. *Albizia lebbek*-Vaagai
4. *Albizia amara*-Usil
5. *Bauhinia purpurea* - Munthari
6. *Bauhinia racemosa* - Aathi
7. *Bauhinia tomentosa*-Iruvathi
8. *Buchanania aillaris*-Kattuma
9. *Borassus flabellifer*-Panai
10. *Butea monosperma* - Murukkamaram
11. *Bobaxceiba*- Ilavu, Sevvilavu
12. *Calophyllum inophyllum* - Punnai
13. *Cassia fistula*- Sarakondrai
14. *Cassia roxburghii*- Sengondrai
15. *Chloroxylon swietenia* - Purasamaram
16. *Cochlospermum religiosum*- Kongu, Manjallavu
17. *Cordia dichotoma*- Mookuchalimaram
18. *Cretevaudansonii*-Mavalingum



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19. *Dilleniaindica*- Uva, Uzha
20. *Dilleniapentagyna*- SiruUva, Sitruzha
21. *Diospyrosbenum*- Karungali
22. *Diospyroschloroxylon*- Vaganai
23. *Ficusumplissima*- Kalltchi
24. *Hibiscus tillaceous*- Atrupcovarasu
25. *Hardwickiabinata*- Aacha
26. *Holopteliaintegriifolia*-Aayili
27. *Lanneacoromandellica* - Odhiam
28. *Lagerstroemia speciosa* - Poo Marudhu
29. *Lepisanthustetraphylla*- Neikottaimaram
30. *Limoniaacidissima* - Vila maram
31. *Litsea glutinosa*-Pisinpattai
32. *Madhucalongifolia* - Iluppai
33. *Manilkara hexandra*-UlakkaiPaalai
34. *Mimusopselengi* - Magizhamaram
35. *Mitragynaparvifolia* - Kadambu
36. *Morinda pubescens*-Nuna
37. *Morinda citrifolia*- VellaiNuna
38. *Phoenix sylvestre*-Eechai
39. *Pongamia pinnata*-Pungam
40. *Premnamollissima*- Munnai
41. *Premna serratifolia*- Narumunnai
42. *Premna tomentosa*-PurangaiNaari, PudangaNaari
43. *Prosopis cinerea* - Vannimaram
44. *Pterocarpus marsupium* - Vengai
45. *Pterospermum canescens*-Vennangu, Tada
46. *Pterospermum xylocarpum* - Polavu
47. *Puthranjivaroxburghii*-Puthranjivi
48. *Salvadora persica*- UgaMaram
49. *Sapindus emarginatus*- Maripungan, Soapukai
50. *Saraca asoca* - Asoca



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51. *Streblus asper* - Pirayamaram
52. *Strychnos nuxvomica* - Yetti
53. *Strychnos potatorum* - Therthang Kottai
54. *Syzygium cumini* - Naval
55. *Terminalia bellerica* - Thandri
56. *Terminalia arjuna* - Venmaradhu
57. *Toona ciliata* - Sandhanavembu
58. *Thespesia populnea* - Puvarisu
59. *Walsuratrifoliata* - valsura
60. *Wrightia tinctoria* - Veppalai
61. *Pithecellobium dulce* - Kodakkapuli

Discussion by SEIAA and the Remarks:-

The subject was placed in the 696th Authority meeting held on 14.02.2024. The Authority noted that the subject was appraised in the 439th SEAC meeting held on 10.01.2024. After detailed discussions, the Authority accepts the recommendation of SEAC and decided to grant **Terms of Reference (ToR) along with Public Hearing** under cluster for undertaking the combined Environment Impact Assessment Study and preparation of separate Environment Management Plan subject to the conditions as recommended by SEAC & normal conditions and conditions in **Annexure 'B'** of this minutes.

Annexure 'B'

Cluster Management Committee

1. Cluster Management Committee shall be framed which must include all the proponents in the cluster as members including the existing as well as proposed quarry.
2. The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc.,
3. The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.
4. Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.



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5. The committee shall deliberate on risk management plan pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan.
6. The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the environmental policy devised shall be given in detail.
7. The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.
8. The committee shall furnish the Emergency Management plan within the cluster.
9. The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public.
10. The committee shall furnish an action plan to achieve sustainable development goals with reference to water, sanitation & safety.
11. The committee shall furnish the fire safety and evacuation plan in the case of fire accidents.

Impact study of mining

12. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area covering the entire mine lease period as per precise area communication order issued from reputed research institutions on the following
 - a) Soil health & soil biological, physical land chemical features .
 - b) Climate change leading to Droughts, Floods etc.
 - c) Pollution leading to release of Greenhouse gases (GHG), rise in Temperature, & Livelihood of the local people.
 - d) Possibilities of water contamination and impact on aquatic ecosystem health.
 - e) Agriculture, Forestry & Traditional practices.
 - f) Hydrothermal/Geothermal effect due to destruction in the Environment.
 - g) Bio-geochemical processes and its foot prints including environmental stress.
 - h) Sediment geochemistry in the surface streams.

Agriculture & Agro-Biodiversity

13. Impact on surrounding agricultural fields around the proposed mining Area.
14. Impact on soil flora & vegetation around the project site.



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15. Details of type of vegetations including no. of trees & shrubs within the proposed mining area and, If so, transplantation of such vegetations all along the boundary of the proposed mining area shall committed mentioned in EMP.
16. The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.
17. Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.
18. The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.

Forests

19. The project proponent shall detailed study on impact of mining on Reserve forests free ranging wildlife.
20. The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.
21. The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.
22. The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.

Water Environment

23. Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period.
24. Erosion Control measures.
25. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies/ Rivers, & any ecological fragile areas.
26. The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.



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27. The project proponent shall study and furnish the details on potential fragmentation impact on natural environment, by the activities.
28. The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts.
29. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.
30. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.

Energy

31. The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilise the Energy shall be furnished.

Climate Change

32. The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities.
33. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock.

Mine Closure Plan

34. Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.

EMP

35. Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued.
36. The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan.

Risk Assessment

37. To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining.

Disaster Management Plan

38. To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid/reduce vulnerability to hazards & to cope with disaster/untooward accidents in &


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around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued.

Others

39. The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological sites, Structures, railway lines, roads, water bodies such as streams, odai, vaari, canal, channel, river, lake pond, tank etc.
40. As per the MoEF& CC office memorandum F.No.22-65/2017-1A.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.
41. The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment. The ecological risks and impacts of plastic & microplastics on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.

A. STANDARD TERMS OF REFERENCE


- 1) Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.
- 2) A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
- 3) All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.
- 4) All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/ topo sheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
- 5) Information should be provided in Survey of India Topo sheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.
- 6) Details about the land proposed for mining activities should be given with information as to



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whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.

- 7) It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.
- 8) Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.
- 9) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.
- 10) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
- 11) Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.
- 12) Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
- 13) Status of forestry clearance for the broken up area and virgin forestland involved in the Project


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- including deposition of Net Present Value (NPV) and Compensatory Afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
- 14) Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
 - 15) The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
 - 16) A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.
 - 17) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.
 - 18) A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
 - 19) Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.
 - 20) Similarly, for Coastal Projects, a CRZ map duly authenticated by one of the authorized agencies demarcating L.TL, H.TL, CRZ area, location of the mine lease with respect to CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management



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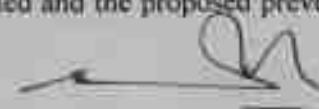
Authority).

- 21) R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.
- 22) One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)]primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.
- 23) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of Vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
- 24) The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
- 25) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
- 26) Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.



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- 27) Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.
- 28) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
- 29) Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.
- 30) Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
- 31) A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.
- 32) Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.
- 33) Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
- 34) Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.
- 35) Occupational Health impacts of the Project should be anticipated and the proposed preventive



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measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.

- 36) Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
- 37) Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
- 38) Detailed Environmental Management Plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
- 39) Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 40) Details of litigation pending against the project, if any, with direction/order passed by any Court of Law against the Project should be given.
- 41) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 42) A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
- 43) Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
- 44) Besides the above, the below mentioned general points are also to be followed:-
 - a) Executive Summary of the EIA/EMP Report
 - b) All documents to be properly referenced with index and continuous page numbering.
 - c) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.
 - d) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.
 - e) Where the documents provided are in a language other than English, an English translation



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SEIAA-TN

should be provided.

- f) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.
- g) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF&CC vide O.M. No. J-11013/41/2006-IA. II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.
- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the ToR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.
- i) As per the circular no. J-11011/618/2010-IA. II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the Environment Clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.
- j) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

In addition to the above, the following shall be furnished:-

The Executive summary of the EIA/EMP report in about 8-10 pages should be prepared incorporating the information on following points:

1. Project name and location (Village, District, State, Industrial Estate (if applicable)).
2. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes.
3. Measures for mitigating the impact on the environment and mode of discharge or disposal.
4. Capital cost of the project, estimated time of completion.
5. The proponent shall furnish the contour map of the water table detailing the number of wells located around the site and impacts on the wells due to mining activity.
6. A detailed study of the lithology of the mining lease area shall be furnished.



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7. Details of village map, "A" register and FMB sketch shall be furnished.
8. Detailed mining closure plan for the proposed project approved by the Geology of Mining department shall be submitted along with EIA report.
9. Obtain a letter /certificate from the Assistant Director of Geology and Mining standing that there is no other Minerals/resources like sand in the quarrying area within the approved depth of mining and below depth of mining and the same shall be furnished in the EIA report.
10. EIA report should strictly follow the Environmental Impact Assessment Guidance Manual for Mining of Minerals published February 2010.
11. Detail plan on rehabilitation and reclamation carried out for the stabilization and restoration of the mined areas.
12. The EIA study report shall include the surrounding mining activity, if any.
13. Modeling study for Air, Water and noise shall be carried out in this field and incremental increase in the above study shall be substantiated with mitigation measures.
14. A study on the geological resources available shall be carried out and reported.
15. A specific study on agriculture & livelihood shall be carried out and reported.
16. Impact of soil erosion, soil physical chemical and biological property changes may be assumed.
17. Site selected for the project - Nature of land - Agricultural (single/double crop), barren, Govt./ private land, status of its acquisition, nearby (in 2-3 km.) water body, population, within 10km other industries, forest, eco-sensitive zones, accessibility, (note - in case of industrial estate this information may not be necessary)
18. Baseline environmental data - air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population
19. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
20. Likely impact of the project on air, water, land, flora-fauna and nearby population
21. Emergency preparedness plan in case of natural or in plant emergencies
22. Issues raised during public hearing (if applicable) and response given
23. CER plan with proposed expenditure.
24. Occupational Health Measures
25. Post project monitoring plan
26. The project proponent shall carry out detailed hydro geological study through intuitions/NABET Accredited agencies.



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27. A detailed report on the green belt development already undertaken is to be furnished and also submit the proposal for green belt activities.
28. The proponent shall propose the suitable control measure to control the fugitive emissions during the operations of the mines.
29. A specific study should include impact on flora & fauna, disturbance to migratory pattern of animals.
30. Reserve funds should be earmarked for proper closure plan.
31. A detailed plan on plastic waste management shall be furnished. Further, the proponent should strictly comply with, Tamil Nadu Government Order (Ms) No.84 Environment and forests (EC.2) Department dated 25.06.2018 regarding ban on one time use and throw away plastics irrespective of thickness with effect from 01.01.2019 under Environment (Protection) Act, 1986. In this connection, the project proponent has to furnish the action plan.

Besides the above, the below mentioned general points should also be followed:-

- a. A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b. All documents may be properly referenced with index, page numbers and continuous page numbering.
- c. Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
- d. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF & CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.
- e. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. In this regard circular no F. No.J-11013/77/2004-IA-II(I) dated 2nd December, 2009, 18th March 2010, 28th May 2010, 28th June 2010, 31st December 2010 & 30th September 2011 posted on the Ministry's website <http://www.moef.nic.in/> may be referred.
 - After preparing the EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned points, the proponent will take



MEMBER SECRETARY
SEIAA-TN

further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

- The final EIA report shall be submitted to the SEIAA, Tamil Nadu for obtaining Environmental Clearance.
- The TORs with public hearing prescribed shall be valid for a period of three years from the date of issue, for submission of the EIA/EMP report as per OMNo.J-11013/41/2006-IA-III(I) (part) dated 29th August, 2017.



MEMBER SECRETARY
SEIAA-TN



Copy to:

1. The Additional Chief Secretary to Government, Environment & Forests Department, Govt. of Tamil Nadu, Fort St. George, Chennai - 9
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD Cum-Office Complex, East Arjun Nagar, New Delhi 110032.
3. The Member Secretary, Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai-600 032.
4. The APCCF (C), Regional Office, MoEF & CC (SZ), 34, HEPC Building, 1st & 2nd floor, Cathedral Garden Road, Nungambakkam, Chennai -34.
5. Monitoring Cell, IA Division, Ministry of Environment, Forests & CC, Paryavaram Bhavan, CGO Complex, New Delhi 110003
6. The District Collector, Krishnagiri District
7. Stock File

From
Dr. S.Vediappan, M.Sc.,Ph.d.,
Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

To
M/s. Sri Devaraajaa M Sand,
D.no. 58B, Gandhi Nagar,
Krishnagiri Town,
Krishnagiri - 635 001.

Roc.No.1121/2020/Mines Dated: .02.2023

Sir,

Sub: Mines and Minerals - Rough stone - Krishnagiri District - Krishnagiri Taluk - Kothapetta Village-patta land in S.F.No. 78/1A(P) & 78/1B(P) Over an extent of 4.00.00 Hects - Quarry lease granted to M/s. Sri Devaraajaa M Sand - Scheme of mining submitted - approved - Other quarry situated in 500 mtrs radial distance - Details furnished - reg.

- Ref:**
1. The District Collector, Krishnagiri Proc.Roc.No.418/2017/ Mines Dated: 31.05.2018.
 2. Mining Plan approved by the Deputy Director of Geology and Mining, Krishnagiri in Rc.no. 418/2017/Mines dated: 29.12.2017.
 3. 1st Scheme of Mining plan approved by Deputy Director of Geology and Mining, Krishnagiri in Rc.no. 1121/2020/Mines dated: 27.01.2023.
 4. Assistant Director Geology and Mining, Krishnagiri Proc. Rc.no. 1121/2020/mines dated: 26.04.2021.
 5. M/s. Sri Devaraajaa M Sand, Gandhi Nagar, Krishnagiri letter dated: 09.02.2023.

Kind attention is invited to the references cited above.

2. A quarry lease had been granted in favour of M/s. Sri Devaraajaa M Sand, to quarry Rough stone for a period of 10 years over an extent of 4.00.00 hecets of Patta land in S.F.No. 78/1A(P) & 78/1B(P) of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District vide the District Collector, Krishnagiri Proc.Roc.No.418/2017/Mines dated: 31.05.2018 and Assistant Director Geology and Mining Proc. Rc.No. 1121/2020/Mines dated: 26.04.2021 under TNMMCR Rules 1959. The lease deed has been executed on 31.05.2018 and the lease period is valid upto 30.05.2028.

3. The Mining plan for the subject Rough stone quarry was approved by the Deputy Director of Geology and Mining, vide letter Rc. No. 418/2017/Mines Dated: 29.12.2017.

4. The lessee has submitted 1st Scheme of mining for the 2nd five years which was approved by the Deputy Director of Geology and Mining, Krishnagiri vide letter dated: 27.01.2023.

5. In this connection, the details of quarries situated within 500mts for the subject quarry requested by the lessee vide letter dated: 09.02.2023 to furnish the same before SELAA in orders to get Environmental Clearance

I. Details of Existing quarries.

Sl No	Name of the lessee	Village & Taluk	Mineral	S.F No.	Extent in Het	GO No.& Date	Lease period.
1.	M/S. Devarajaa M.Sand, No. 58 B Gandhi Nagar, Krishnagiri	Krishnagiri, Kothapetta	Rough Stone	78/1A(P) & 78/1B(P)	4.00.00	Rc.No. 418/2018/ Mines dated 30.05.2018	31.05.2018 to 30.05.2028 Instant Proposal (proposed for 2 nd five year)
2.	Tmt. K.M. Vijaya, W/o. D. Madhazhagan, D.No. 58B, Gandhi Nagar, Krishnagiri Town, Krishnagiri	Krishnagiri, Kothapetta	Rough Stone	78/1B(P)	4.00.00	Rc.No. 419/2017/ Mines dated 30.05.2018	31.05.2018 to 30.05.2028
3.	M/s. Ma Quality stone, 58B Gandhi Nagar	Krishnagiri, Kothapetta	Rough Stone	87/1B2(P)	3.70.00	Rc.No. 1179/2020 mines date: 23.11.2022	23.11.2022 to 22.11.2032


II. Details of abandoned/Old quarries.

Sl No	Name of the lessee	Village & Taluk	Mineral	S.F No.	Extent in Het	GO No.& Date	Lease-period.
1.	Thiru. Ganesan	Krishnagiri, Kothapetta	Rough Stone	56/1(P-D)	2.54.00	Rc.No. 611/2009/ Mines dated 14.05.2015	14.05.2015 to 13.05.2020
2.	Tmt. Sa. Sumitha Shankar, W/o Shankar Raj, 252, Methanda Village, Venkatapur am Panchayat, Krishnagiri	Krishnagiri, Kothapetta	Rough Stone	56/1 (P-5)	1.20.00	Rc.No. 49/2016/ Mines dated 18.08.2016	1.09.2016 to 31.08.2021

3.	Tmt. Qummarumisa	Krishnagiri, Kothapetta	Rough Stone	87/1B1(P) & 87/1B2(P)	4.75.00	Rc.No. 08/2023/ mines date: 05.02.2016	02.03.2016 to 01.06.2021
4.	Thiru. A. Madesh	Krishnagiri, Kothapetta	Rough Stone	56/1(P-C)	3.06.00	Rc.No. 126/2010/ mines date: 27.10.2009	03.05.2010 to 02.05.2015

III. Details of Proposed quarries

No	Name of the lessee	Village & Taluk	Mineral	S.F No.	Extent in Het	GO No.& Date	Lease period.
	----- Nil -----						


 Deputy Director,
 Dept of Geology and Mining,
 Krishnagiri.

Copy to :-

The Chairman,
 Tamil Nadu State Environment
 Impact Assessment Authority,
 3rd Floor, Panakal Maligai,
 No. 1 Jeenes Road, Saidapet,
 Chennai -15.

From

Dr. S.Vediappan, M.Sc.,Phd.,
Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

To

M/s. Sri Devaraajaa M Sand,
D.no. 58B, Gandhi Nagar,
Krishnagiri Town,
Krishnagiri - 635 001.

Roc.No. 1121/2020/Mines dated: .02.2023.

Sir,

Sub: Mines and Minerals - Rough stone - Krishnagiri District - Krishnagiri Taluk - Kothapetta Village-patta land in S.F.No. 78/1A(P) & 78/1B(P) Over an extent of 4.00.00 Hects - Quarry lease granted to M/s. Sri Devaraajaa M Sand - Quarry pit dimension details - Furnished - reg.

Ref:

1. The District Collector, Krishnagiri Proc.Roc.No.418/2017/ Mines Dated: 31.05.2018.
2. Mining Plan approved by the Deputy Director of Geology and Mining, Krishnagiri in Rc.no. 418/2017/Mines dated: 29.12.2017.
3. 1st Scheme of Mining plan approved by Deputy Director of Geology and Mining, Krishnagiri in Rc.no. 1121/2020/Mines dated: 27.01.2023.
4. Assistant Director Geology and Mining, Krishnagiri Proc. Rc.no. 1121/2020/mines dated: 26.04.2021.
5. M/s. Sri Devaraajaa M Sand, Gandhi Nagar, Krishnagiri letter dated: 09.02.2023.

Kind attention is invited to the reference cited above.

2. A quarry lease had been granted in favour of M/s. Sri Devaraajaa M Sand, to quarry Rough stone for a period of 10 years over an extent of 4.00.00 hecets of Patta land in S.F.No. 78/1A(P) & 78/1B(P) of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District vide the District Collector, Krishnagiri Proc.Roc.No.418/2017/Mines dated: 31.05.2018 and Assistant Director Geology and Mining Proc. Rc.No. 1121/2020/Mines dated: 26.04.2021 under TNMMCR Rules 1959. The lease deed has been executed on 31.05.2018 and the lease period is valid upto 30.05.2028.

3. The lessee has submitted 1st Scheme of mining for the 2nd five years which was approved by the Deputy Director of Geology and Mining, Krishnagiri vide letter dated: 27.01.2023

4. The pit dimension of the subject quarry to furnish the same before SEIAA in order to get Environmental Clearance as per scheme of mining plan is given as under.

Length (m)	Width (m)	Depth (m)
210.0	97.0	20.0

S. S. V. / 14.02.23
Deputy Director,
Dept of Geology and Mining,
Krishnagiri.


208 / 14/2/23
To,
The Chairman,
Tamil Nadu State Environment
Impact Assessment Authority,
3rd Floor, Panakal Maligai,
No. 1 Jeenes Road,
Saidapet, Chennai -15.

சான்றி

கிஷ்நாநகரி டாடாபட்டம், கிஷ்நாநகரி வட்டம், கிஷ்நாநகரி
புள்ளி வட்டம், கிஷ்நாநகரி ஹர் டாடாபட்டம் 78/1A, 78/1B.
(உயர்நீதிமன்ற கிராமம்)
(4.00.0 உயர்நீதிமன்றம்)

டாடாபட்டம் புள்ளி M/S SRI Devarajaa 'M' Sand உ

சுமார் 500 கிலோ சந்திராபுரம் கிராமம் கிஷ்நாநகரி, கிஷ்நாநகரி
கிராமம், கிஷ்நாநகரி, உயர்நீதிமன்ற கிராமம், கிஷ்நாநகரி
கிராமம் கிஷ்நாநகரி, கிஷ்நாநகரி கிராமம். கிஷ்நாநகரி
கிராமம், கிஷ்நாநகரி, கிஷ்நாநகரி கிராமம் கிஷ்நாநகரி
கிராமம் கிஷ்நாநகரி கிராமம் கிஷ்நாநகரி கிராமம்
கிஷ்நாநகரி கிராமம் கிஷ்நாநகரி கிராமம் கிஷ்நாநகரி
கிராமம் கிஷ்நாநகரி கிராமம் கிஷ்நாநகரி கிராமம்


village Administrative Officer
71, KRISHNAGIRI
KRISHNAGIRI

M/s. Sri Devaraajaa 'M' Sand, Rough stone quarry in the S.F.Nos.78/1A(P) & 78/1B(P) over an extent of 4.00.0 ha. in Kothapetta Village, Krishnagiri Taluk, Krishnagiri District.

GENERAL VIEW OF THE LEASE AREA



For M/s. Sri Devaraaja 'M' Sand,

(Deponent)


Village Administrative Officer
71, KRISHNAGIRI
KRISHNAGIRI.

From

Dr.S.Vediappan, M.Sc.,Ph.D.,
Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

To

M/s. Sri Devaraajaa M Sand,
D.no. 58B, Gandhi Nagar,
Krishnagiri Town,
Krishnagiri District - 635 001.

Roc.No. 1121/ 2020 /Mines Dated: 27.01.2023.

Sir,

Sub: Mines and Minerals – Minor Mineral – Rough stone - Quarry lease granted in favour of M/s. Sri Devaraajaa M Sand over an extent of 4.00.00 Hects of Patta land in S.F.No. 78/1A(P), 78/1B(P) of Kothapetta Village, Krishnagiri Taluk and District for a period of 10 years - Scheme of Mining submitted for the 2nd five year period 2023-2024 to 2027-2028 - Approved - Reg.

- Ref:**
1. The District Collector, Krishnagiri Proc. Roc. No.418/2017/ Mines dated: 30.05.2018.
 2. Mining plan approved by the Deputy Director of Geology and Mining, Krishnagiri in Roc.No.418/2017/Mines dated: 29.12.2017.
 3. The Assistant Director (Mines) Krishnagiri, Proc. Rc.No. 1121/2020/Mines dated: 26.04.2021.
 4. 1st Scheme of mining plan for the next five year period from 2023-2024 to 2027-2028 submitted by the lessee at on 13.01.2023.

Kind attention is invited to the references cited.

2) A quarry lease had been granted in favour of M/s. Sri Devaraajaa M Sand, to quarry Rough stone for a period of 5 years over an extent of 4.00.00 hectcs of Patta lands in S.F.Nos. 78/1A(P) (1.75.00), 78/1B(P) (2.25.00) of Kothapetta Village, Krishnagiri Taluk and District vide the District Collector, Krishnagiri Proc. Roc. No. 418/2017/ Mines dated: 30.05.2018 under TNMMCR Rules 1959. The lease deed has been executed on 31.05.2018 and the lease period is valid upto 30.05.2023.

3) The Mining plan for the subject Rough stone quarry was approved by the Deputy Director of Geology and Mining, vide letter Rc.

No. 418/2017/Mines Dated: 29.12.2017 which came into effect from the date of execution i.e. on 31.05.2018.

4) Meanwhile, the lessee M/s. Sri Devaraajaa M Sand has requested to extend the lease period for the said quarry lease from 5years to 10 years as per G.O.(MS) No. 208 Industries (MMC.1) Department dated: 21.09.2020.

5) Based on the request of the lessee M/s. Sri Devaraajaa M Sand, the report submitted by Assistant Geologist (Mines), Special Deputy Thasildar (Mines), Special Revenue Insepctor (Mines) and Surveyor (Mines) the lease was extended a further period of 5 years from the expiry of the existing lease period i.e. from 31.05.2023 vide Assistant Director (Mines) Proc. Rc.No. 1121/2020/Mines dated: 26.04.2021 upto the periodending 30.05.2028.

6) In this regard the lessee has submitted the scheme of mining for the next five year period from 2023-2024 to 2027-2028 on 31.05.2023 to 30.05.2028.

7) As per the scheme of mining plan submitted for approval, it is mentioned that the total available geological reserves are calculated as 1031457 Cbm with 95% recovery and after providing benches for systematic and scientific mining the mineable reserves are calculated as 487698 Cbm @ 95% recovery upto a maximum of depth of 41m (1.0m Gravel +40.0m Rough stone).

8) As per the Scheme of mining the year wise production for the proposed five years are as follows.

Year	Recoverable reserves @ 95%(m³)	Top Soil
31.05.2023 to 30.05.2024	119857	799
31.05.2024 to 30.05.2025	113003	-
31.05.2025 to 30.05.2026	98420	-
31.05.2026 to 30.05.2027	84788	-
31.05.2027 to 30.05.2028	71630	-
Total	487698	799

9) The lessee had obtained transport permits for a quantity of 4,10,400 Cbm Upto 21.12.2022 of rough stone as against the proposed production of 10,25,995 Cbm (for the Mining plan period from 2018-19 to 2022-23).

10) The lessee has obtained Environment Clearance from DEIAA vide Lr. No. 35/DEIAA-KGI/EC.No. 27/2018 dated: 27.02.2018, for a quantity of 10,25,995 Cbm of rough stone for five years.

11) The draft Scheme of Mining submitted by Tmt. M/s. Sri Devaraajaa M Sand has been scrutinized as per the guide lines/ Instructions issued by the Commissioner of Geology and Mining, Chennai-32. The Scheme of mining is prepared in accordance with the guidelines/ instructions issued.

12) Hence, in accordance with the TNMMCR 1959 and instructions issued by the Commissioner of Geology and Mining, Chennai, the said scheme of mining for the next five year period 2023-2024 to 2027-2028 (31.05.2023 to 30.05.2028) submitted by the lessee M/s. Sri Devaraajaa M Sand in respect of the area granted to quarry rough stone in Patta land S.F.No 78/1A(P), 78/1B (P) over an extent of 4.00.00 Hects is hereby approved subject to the following conditions.

- i. Based on the above details and in exercise of the powers conferred under Rule 41(9)(iii) of TNMMCR 1959 the scheme of mining submitted by M/s. Sri Devaraajaa M Sand, Krishnagiri is here by approved subject to the following conditions.
- ii. That the scheme of mining is approved without prejudice to any other law applicable to the quarry lease from time to time whether such laws are made by the Central Government, State Government or any other authority.
- iii. This approval of the scheme of mining does not in any way imply the approval of the Government in terms of any other provisions of Mines and Minerals Development and Regulation) Act 1957, or any other connected laws including Forest (Conservation) Act 1957, or any other connected Laws industry Forest (Conservation) Act 1980, Forest Conservation Rules 1981 Environment protection Act 1980, Indian Explosive Act 1884

(Central Act IV of 1884) and the rules made there under, Mineral Conservation and Development Rules 1988 and The Tamil Nadu Minor Mineral Concession rules, 1959.

- iv. This scheme of Mining including progressive mine closure plan is approved without prejudice to any other order or direction from any court of competent jurisdiction.
- v. Provisions of the Mines Act, 1952 and the Rules and Regulations made there under including submission of notice of opening, appointment of manager and other statutory officials as required under Mines Act, 1952 shall be complied with.
- vi. Provisions made under Mines and Minerals (Development and Regulation) Act, 1957, MMDR amendment Act, 2015 made there under shall be complied with.
- vii. This approval of scheme of mining is restricted to the mining lease area only. The mining lease area is as shown on the statutory plan under TNMMCR Rules, 1959.
- viii. The lessee should obtain environmental clearance from the appropriate authority.
- ix. The earlier instances of irregular/illegal quarrying, if any shall not be regularized through the approval of this document.
- x. The lessee shall remit the penalty/ cost of mineral/ other dues if any as arrived by the District Collector/ Deputy Director of Geology and Mining, Krishnagiri District.
- xi. Non adherence to any condition set-out above, the approval shall be deemed to have been withdrawn with immediate effect.

Encl: 1.Scheme of Mining Plan 3 Copies.


Deputy Director,

Dept of Geology and Mining,
Krishnagiri.

Copy to :-

The Chairman,
Tamil Nadu State Environment
Impact Assessment Authority,
3rd Floor, Panakal Maligai,
No. 1 Jeenes Road, Saidapet, Chennai -15.

SCHEME OF MINING

**WITH
PROGRESSIVE MINE CLOSURE PLAN
FOR
ROUGH STONE QUARRY**



(Prepared Under Rule 12 of MMC DR 1988 (as amended upto 02.08.2011)
& as per the amendments Under Rule 41 & 42 of TNMMCR, 1959)

PERIOD OF SCHEME OF MINING WITH PMCP: 2023-2024 to 2027-2028

EXTENT : 4.00.0 HA.
S.F.Nos. : 78/1A (P) & 78/1B (P)
VILLAGE : KOTHAPETTA
TALUK : KRISHNAGIRI
DISTRICT : KRISHNAGIRI
STATE : TAMIL NADU

LESSEE
M/s. SRI DEVARAAJAA 'M' SAND,
D. No.58B, GANDHI NAGAR,
KRISHNAGIRI TOWN,
KRISHNAGIRI DISTRICT- 635 001.

PREPARED BY :
S. DHANASEKAR, M.SC.,
QUALIFIED PERSON,
NO. 5/30-7 B, AVVAI NAGAR,
PONKUMAR MINES ROAD,
JAGIR AMMAPALAYAM,
SALEM DISTRICT - 636 302.
E-mail: geodhana@yahoo.co.in
CELL: 98946 28970 & 73733-74702.

M/s. Sri Devaraajaa 'M' Sand,
D. No.58B, Gandhi Nagar,
Krishnagiri Town,
Krishnagiri District- 635 001.



CONSENT LETTER FROM LESSEE

I hereby give my consent for preparing the Scheme of Mining with Progressive Mine Closure Plan in respect of Rough Stone Quarry over an extent of 4.00.0 Ha. in S.F.Nos.78/1A(P) & 78/1B(P) of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu State has been prepared by **Shri S. DHANASEKAR, M.Sc.**, Qualified Person.

I request the Department of Geology and Mining, Krishnagiri to make further correspondence regarding modification of the Scheme of Mining with Progressive Mine Closure Plan with the said Qualified Person in his following Address:

S.DHANASEKAR, M.Sc.,

Qualified Person

No.5/30-7B, Avvai Nagar,

Ponkumar Mines Road,

Jagir Ammapalayam,

Salem District-636 302.

E-mail: geodhana@yahoo.co.in

Cell: 98946-28970

I hereby undertake that all the modifications, if any, made in the Scheme of Mining with Progressive Mine Closure Plan by the Qualified Person may be deemed to have been made with our knowledge and consent and shall be acceptable to me and binding on me in all respects.

For M/s. Sri Devaraajaa 'M' Sand,

Signature of the Lessee

Place: KRISHNAGIRI

Date:

M/s. Sri Devaraajaa 'M' Sand,
D. No.58B, Gandhi Nagar,
Krishnagiri Town,
Krishnagiri District- 635 001.



DECLARATION OF THE MINE OWNER

I hereby declare that the Scheme of Mining with Progressive Mine Closure Plan in respect of Rough Stone Quarry over an extent of 4.00.0 Ha. in S.F. Nos. 78/1A (P) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu State has been prepared in full consultation with us by **Shri S. DHANASEKAR, M.Sc.**, Qualified Person. I have understood its contents and agree to implement the same in accordance with Laws applicable to mines.

For M/s. Sri Devaraajaa 'M' Sand,

Signature of the Lessee

Place: KRISHNAGIRI

Date:

S.Dhanasekar.M.Sc.,(Geol),
Qualified Person,

No.5/30-7B, Avvai Nagar,
Ponkumar Mines Road,
Jagir Ammapalayam,
Salem- 636 302.



CERTIFICATE

This is to certify that, the provisions of Minerals Conservation and Development Rules, 1988(MMCDR) have been observed in the Scheme of Mining with Progressive Mine Closure Plan for Kothapetta Rough Stone Quarry over an extent of 4.00.0 Ha. in S.F. Nos. 78/1A (P) & 78/1B(P) of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District prepared for M/s. Sri Devaraajaa 'M' Sand, D.No.58B, Gandhi Nagar, Krishnagiri Town, Krishnagiri District- 635 001.

Whenever specific permissions, approvals, exemptions or relaxations are required, the lessee will approach the concerned authorities of Director General of Mines Safety (DGMS), 4th B Block, 100, No.5, 14th Main, 100 Feet Road, Koramangala, Bangalore, Karnataka- 560 034, for such permissions, exemptions, relaxations and approvals.

It is also certified that the information furnished in the above Scheme of Mining with Progressive Mine Closure Plan are true and correct to the best of our knowledge.

Certified


Signature of Qualified Person.
S.DHANASEKAR, M.Sc.,(Geo)
Qualified Person

Place : SALEM

Date :

S.Dhanasekar.M.Sc.,(Geol),
Qualified Person,

No.5/30-7B, Avvai Nagar,
Ponkumar Mines Road,
Jagir Ammapalayam,
Salem- 636 302



CERTIFICATE

Certified that provision of Mines Act, Rules and Regulations and orders made there under have been observed in the Scheme of Mining with Progressive Mine Closure Plan for Kothapetta Rough Stone Quarry over an extent of 4.00.0 Ha. in S.F.Nos. 78/1A (P) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District prepared for M/s. Sri Devaraajaa 'M' Sand, D.No.58B, Gandhi Nagar, Krishnagiri Town, Krishnagiri District- 635 001.

Whenever specific permissions, approvals, exemptions or relaxations are required, the lessee will approach the concerned authorities of the Director General of Mines Safety (DGMS), 4th B Block, 100, No.5, 14th Main, 100 Feet Road, Koramangala, Bangalore, Karnataka- 560 034 for such permissions, exemptions, relaxations and approvals.

It is also certified that information furnished in the above Scheme of Mining with Progressive Mine Closure Plan are true and correct to the best of our knowledge.

Certified


Signature of Qualified Person.
S.DHANASEKAR, M.Sc.,(Geo)
Qualified Person

Place : SALEM

Date :

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ANNEXURES



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10.	Copy of Managing Partner ID Proof	X
11.	Copy of Mining Plan Approval Letter	XI
12.	Copy of Qualification Certificate	XII
13.	Copy of Experience Certificate	XIII
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LIST OF PLATES



SL No.	Description	Plate No.	Scale
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7.	Surface and Geological Plan	III	1:1000
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**SCHEME OF MINING ,
WITH
PROGRESSIVE MINE CLOSURE PLAN
FOR
KOTHAPETTA ROUGH STONE QUARRY**

(Prepared Under Rule 12 of MCDR, 1988(as amended upto 02.08.2011) & as per the amendments Under Rule 41 & 42 of TNMMCR, 1959)



1.0 General:

The Scheme of Mining along with Progressive Mine Closure Plan has been prepared in respect of Rough Stone Quarry in Patta Land S.F.Nos.78/1A (P) & 78/1B (P) over an extent of 4.00.0 Ha. in Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, prepared for M/s. Sri Devaraajaa 'M' Sand, D.No.58B, Gandhi Nagar, Krishnagiri Town, Krishnagiri District- 635 001.

The fresh Mining Plan was approved by Deputy Director, Geology and Mining, Krishnagiri vide letter Roc No. 418/2017/Mines dated:29.12.2017 for a period of five years from 2018-2019 to 2022-2023. Please refer Annexure-XII. Copy of Approved Mining plan Letter.

Accordingly, the Lessee had obtained Environmental Clearance from DEIAA-KGI vide order Lr. No.35/DEIAA-KGI/Ec.No.27/2018 dated 27.02.2018. Please refer Annexure- III.

The Mining Lease was granted Vide Proceeding No. Proc.No. 418/2017/Mines dated 31.05.2018 for a period of Five years.

The lease deed was executed on 31.05.2018. Mining operation commenced on 01.06.2018. The lease will expire on 30.05.2023.

However as per the recent Amendment TNMMCR, G.O.(Ms)No.208 Industries (MMC.1) Department dated 21.09.2020, the lease period will be extended for another five years subject to the condition that the approved scheme of mining must be submitted along with the prescribed form in **Appendix VI.**

This Scheme of Mining for the period 2023-2024 to 2027-2028 is now being prepared and submitted under Rule 12 of MCDR, 1988(as amended upto 02.08.2011) and 41 & 42 of TNMMCR, 1959 for approval.

The mining operations are done by opencast semi-mechanized methods with jack hammer drilling and blasting, hydraulic excavators are used for loading the Rough stone from pithead to the needy crushers.


S.DHANASEKAR, M.Sc.(Geo)
Qualified Person

1.1. Review of Mining Plan:

a) Name of lessee : M/s. Sri Devaraajaa 'M' Sand,
Address : D.No.58B, Gandhi Nagar,
Krishnagiri Town,
Krishnagiri District,
District : Krishnagiri
State : Tamil Nadu
Pin code : 635 001.



b) Status of lessee

The lessee is a Partnership Firm.

c) Mineral(s) which is / are included in the prospecting license (For Fresh grant):
-Nil-

d) Mineral(s) which is / are included in the letter of Intent / lease deed:

Rough Stone occurs in the lease area and the Lessee intends to quarry the same.

e) Mineral(s), which is the lessee, intends to Quarry:

Rough Stone occurs in the lease area and the Lessee intends to quarry the same.

f) Name and Address of the Qualified Person :

Name : SHRI S. DHANASEKAR, M.Sc.,
Address : Qualified Person
No.5/30 7B, Avvai Nagar,
Ponkumar Mines Road
Jagir Ammapalayam,
Salem - 636 302.
Cell No. : 98946-28970 & 73733-74702.
Email : geodhana@yahoo.co.in

2.0 LOCATION AND ACCESSIBILITY

a) Lease Details (Existing Quarry)

Name of the Quarry : Kothapetta Rough Stone Quarry
Latitude of boundary point : 12° 32' 49.8798" N to 12° 32' 46.6000" N
Longitude of boundary point : 78° 12' 49.4269" E to 78° 12' 39.2801" E
Date of grant of lease : 31.05.2018
Period/Expiry Date : 30.05.2023.
Name of leaseholder : M/s. Sri Devaraajaa 'M' Sand,
Postal Address : D.No.58B, Gandhi Nagar,
Krishnagiri Town,
Krishnagiri District - 635 001.
Tamil Nadu.

b) Details of lease area with location map (Quarry)Table-1

Forest (specify)	Area (Ha.) -NIL-	i) Waste land	Nil
		ii) Grazing land	Nil
		iii) Agriculture land	Nil
		iv) Others, Patta Land (specify)	4.00.0 Ha



Total lease area : 4.00.0 Ha
 State : Tamil Nadu
 District : Krishnagiri
 Taluk : Krishnagiri
 Village : Kothapetta
 Whether the area is recorded to be in forest : This is Patta Land and is not covered in Forest area of any kind.

Please refer Location Plan and Mine lease plan – Plate No. I & II.

c) Existence of public road/railway line, if any nearby and approximate distance:

Extent of the area is shown in the FMB. The District Head Quarter Krishnagiri is at a distance about 3.1 Km. from quarry site. The area is at a distance of about 2.0 kms from Krishnagiri Village. Krishnagiri – Hosur Main Road (NH-44) is at a distance of about 1.7 kms Western side of the lease area.

Nearest Railhead is Rayakkottai Railway Station that is located about 30 kms from the Quarry. Post office are available in Krishnagiri at a distance of about 3.6Kms. Police Station are available in Krishnagiri at a distance of about 3.6 Kms. Air Port is available in Bangalore, about 120.0 kms. from the Quarry. Nearest Port is Chennai about 259.0 kms. from the area.

d) The Mining lease area is bounded by four corners and the coordinates are:Table No:2

Toposheet No	: No. 57 – L/2
Latitude	: 12° 32' 49.8798" N to 12° 32' 46.6000" N
Longitude	: 78° 12' 49.4269" E to 78° 12' 39.2801" E
North East	: 12° 32' 49.8798" N 78° 12' 49.4269"E
South East	: 12° 32' 45.4896" N 78° 12' 49.4142"E
North West	: 12° 32' 48.3689" N 78° 12' 41.7620"E
South West	: 12° 32' 45.4109" N 78° 12' 41.5005"E

e) A general location map showing area and access routes. It is preferred that the area be marked on a Survey of India topographical map or a cadastral map or forest map as the case may be. However, if none of these are available, the area may be shown on an administrative map:

A general location map showing area boundaries and existing access routes shown on the Toposheet Plan (Key Plan) which is enclosed as Plate No.Ib. Since existing routes are being followed to reach the lease area no fresh access routes are proposed hence not shown.

Top Sheet No. : Topo Sheet No.57 L/2
Latitude : 12° 32' 49.8798" N to 12° 32' 46.6000" N
Longitude : 78° 12' 49.4269" E to 78° 12' 39.2801" E

f) Land use pattern:

Dry Mineral bearing land.

g) Location of the Area :

The area for quarrying lease of Kothapetta Rough Stone Quarry is located in S.F.Nos.78/1A (Part) & 78/1B (Part) over an extent of 4.00.0 Ha. in **Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamilnadu State.**

3.0 DETAILS OF APPROVED MININGPLAN/SCHEME OF MINING:

3.1 Date and reference of earlier approved MP:

The fresh Mining Plan was approved by Deputy Director, Department of Geology and Mining, Krishnagiri vide letter Roc No. 418/2017/Mines dated:29.12.2017 for a period of five years 2018-2019 to 2022-2023. Please refer Annexure-XII. Copy of Approved Mining plan Letter.

3.2 Details of last modifications if any (for the previous approved period) of approved MP/SOM, indicating date of approval, reason for modification:

-Nil-

3.3 Give review of earlier approved proposal (if any) in respect of exploration, excavation, reclamation etc:'

i) Exploration:

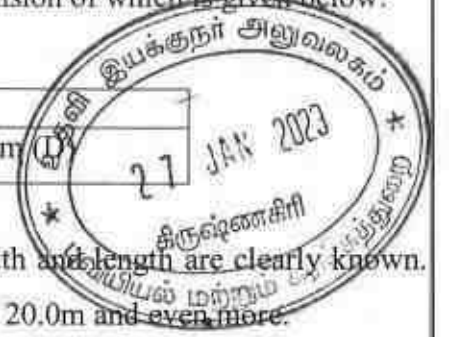
In the previous approved Mining Plan, it was mentioned that no exploration was carried out. Massive rough stone exposures were clearly visible in the lease area.

Present Mine working had reached a depth of about 20.0m.

There is only one working pit available in this area, the dimension of which is given below:

Table No.3

Existing Pit Details
210.0m(L)Avg X 97.0m (W) Avg X 20.0m (D)



The area is very small. The attitude of the deposits like width and length are clearly known. Depth persistence of Rough Stone in this area is already proved upto 20.0m and even more.

ii) Mine Development :

The Mine workings have reached a depth of nearly 20.0m. Development of the pits has been done only in the areas where the Rough Stone could be easily mined.

iii) Exploitation :

The Quarry workings have reached a depth of nearly 20.0m.

There is only one working pit, the dimension of which is given below :

Table No.4

Existing Pit Details
210.0m(L)Avg X 97.0m (W) Avg X 20.0m (D)

The Planned and Actual Production for last approved Mining Plan period figures are given as follows:

Table No.5

YEAR	PLANNED(Cu.m) ROUGH STONE	ACTUAL(Cu.m) ROUGH STONE
31.05.2018- 30.05.2019	204720	46800
31.05.2019- 30.05.2020	205751	114000
31.05.2020- 30.05.2021	204887	110800
31.05.2021- 30.05.2022	205020	100800
31.05.2022- 30.05.2023 (upto 01.11.2022)	205618	33600
TOTAL	1025995	406000

iv) Waste Management:

In the Previous approved Mining Plan Period, the mine waste has been used for roads in the low laying adjacent area.

v) Reserves and Resources estimated in the earlier approved mining plan period (2018- 2019 to 2022-2023) with grade:

Geological Reserve (insitu) under Proved category	: 2196691 cu.m
Mineable Reserve	: 1079995 cu.m
Year wise Production	: 1025995 cu.m



While calculating Mineable Reserve, the boundary barrier and bench width, height and slope are taken into account. Hence, the Mineable Reserve will be always less than the insitu reserve.

vi) Depletion of Reserve:

The actual production of Rough Stone for the last five years (31.05.2018-30.05.2019 to 31.05.2022-30.05.2023(upto 01.11.2022)) is about 406000 cu.m of saleable Rough Stone.

vii) Afforestation and Reclamation :

It was clearly stated in the approved Mining Plan that during afforestation programme tamarind/casuarinas trees will be planted in the lease area. Presently, lessee had planted some trees in the lease area in scattered manner. Since, the Quarry is active. Mining should be carried out in such a manner that after certain period, some part is available for reclamation.

viii) Control of Dust, Noise & Ground Vibrations:

Quarrying of Rough Stone had been carried out by drilling and control blasting by using low power explosives, and hence, noise will be very minimum.

The dust control was taken care by water sprinkling on the haul roads. The amount of ground vibration is very less since only control blasting by using low power explosives is used.

Reclamation & Rehabilitation :

Reclamation of mined out area does not arise and has not reached the full extent of working. After closure of the Mine, the pit will be allowed to collect seepage and rain water. This will help to charge the nearby agricultural wells.

PART - 'A'

1.0 GEOLOGY AND EXPLORATION

A) Briefly Describe The Topography, Drainage Pattern, Vegetation, Climate, Rainfall Data of the Area Applied/Mining Lease Area:

a) Topography :

The Mining Lease area is approximately at 12° 32' 49.8798" N to 12° 32' 46.6000" N latitude and 78° 12' 49.4269" E to 78° 12' 39.2801" E longitude and is represented by Topo Sheet No.57 L/2 of Survey of India.

The lease area is slightly elevated terrain and sloping towards North Eastern side. The general trend of formation is NE– SW and dip towards SE-70°. The altitude of the area is about 537 MSL.

Vegetation:

It is a dry Mineral bearing. It is a dry place with a Gravel cover of about 1.0m

Water table and Drainage Pattern:

Water table is touched at a depth of 76m in rainy season, during North-East monsoon and at 82m in summer months. The water table fluctuation is verified by observing the water levels in the above seasons in the nearby wells.

Climatic Conditions:

The area receives rainfall of about 800mm to 900mm per annum and the rainy season is mainly from October-January during Northeast Monsoon. The summer is hot with maximum temperature of 38°C and winter encounters a minimum temperature of 18°C.

Rainfall Data:

The area receives scanty rainfall and the annual rainfall of the area varies between 800mm to 900mm.

b) Geology of the Area :

The lease area is slightly elevated topography, the area has been quarrying operation earlier. Rough stone exposures are clearly visible in existing pit within the lease applied area. Gravel are noticed at the average thickness of 1m. The slope is gentle towards North Eastern side. The altitude of the area is above 537m from MSL.

Peninsular gneiss forms the oldest rock formations, in which the massive formation of charnockite lies over with rich accumulation of recent quaternary formation. On regional scale the charnockite body trends NE– SW with dipping towards SE70°.

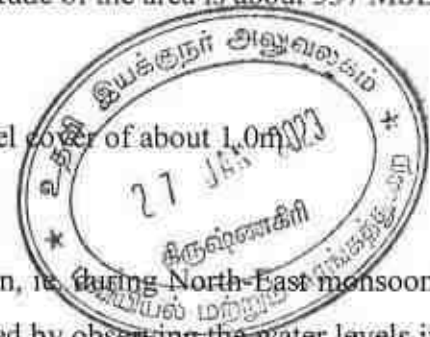
The general geological sequences of the rocks in this area are given below

AGE	FORMATION
Recent	Quaternary Recent (Gravel)
Archaean	Charnockite (Granitoid Gneiss)
	Peninsular Gneiss Complex II.

c) Details of Exploration already carried out:

The area was thoroughly explored by the Qualified Person and his geological team. Massive rough stone exposures are clearly visible from the existing pit within the lease area.

In this area, the mine working has reached a depth of about 20.0m.



There is only one working pit available in this area, the dimension of which is given below :

Table No.6

Existing Pit Details
210.0m(L)Avg X 97.0m (W) Avg X 20.0m (D)

The area is very small. The attitude of the deposits like width and length are clearly known. Depth persistence of Rough Stone in this area is already proved upto 20.0m and even more.



d) The Physical Character of the Rough Stone :

Rough stone texture is medium to coarse grained and is composed of recrystallized minerals, hence it is a metamorphic rock. The grains are subhedral, inequigranular, with a granoblastic texture. The grains are crystalline ie. Complete crystallization has occurred. Cleavage is absent. The color is dark olive green. The details collected during the field survey and found to be sufficient for the preparation of the Scheme of Mining with PMCP.

e) Number of boreholes indicating type (Core/RC/DTH), diameter, spacing, inclination, Collar level, depth etc... with standard bore hole logs duly marking on

There is no borehole exist in the lease area.

i)RESERVES :

a. Method of Estimation of Reserves:

The Geological and Recoverable reserves are estimated by cross sectional method up to a depth of 41.0m (1.0m Gravel + 40.0m Rough Stone). In the earlier plan instead of mentioning the topography as elevated land by taking contour map it was mentioned as deposit having thickness of 25 meters above ground level. But in the field it is revealed that there is no deposit above ground level, but it is an elevated terrain. Plans and Sections have been drawn with a scale of 1:1000 & Hor: 1:1000, Ver: 1:500 respectively.

Selecting a method of reserve estimation depends upon the geology of the mineral deposit, exploration method, purpose of computation and the required degree of accuracy and also on the contemplated mining system.

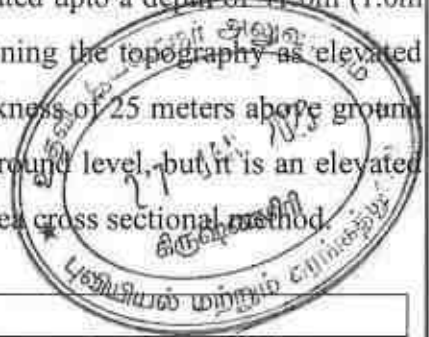
The ideal method should be simple, rapid, reliable, consistent with the character of the mineral body and available data and suitable for rapid checking. The method adopted for calculation of reserves in this area is by computing the volume by cross sectional method upto a particular level. The volume is calculated by multiplying the cross sectional area with the length of the sectional influences.

The details of estimation of Geological Reserves and Mineable Reserves with reference to the Geological Plan & Cross section and Conceptual Plan & Section as shown in (Plate No.III, III-A & III-B and VII, VII-A & VII-B) respectively.

b. GEOLOGICAL RESERVES:

The Geological reserve of Rough Stone and Gravel is calculated upto a depth of 41.0m (1.0m Gravel + 40.0m Rough Stone). In the earlier plan instead of mentioning the topography as elevated land by taking contour map it was mentioned as deposit having thickness of 25 meters above ground level. But in the field it is revealed that there is no deposit above ground level, but it is an elevated terrain. Total Geological reserve is estimated at **1085740 Cu.m** by area cross sectional method.

Table No.7



GEOLOGICAL RESERVES

Section	Bench	L (m)	Wm)	D(m)	Volume In M3	Geological Reserves in m3 @ 95%	Mine waste in m3 @ 5%	Gravel in m3
XY-AB	I	30	28	1				840
	II	45	41	5	9225	8764	461	
	III	62	88	5	27280	25916	1364	
	IV	93	88	5	40920	38874	2046	
	V	93	88	5	40920	38874	2046	
	VI	93	88	5	40920	38874	2046	
	VII	93	88	5	40920	38874	2046	
	VIII	93	88	5	40920	38874	2046	
	IX	93	88	5	40920	38874	2046	
TOTAL					282025	267924	14101	840
XY-CD	I	1	32	1				32
	II	1	49	5	245	233	12	
	III	1	57	5	285	271	14	
	IV	13	78	5	5070	4817	253	
	V	13	78	5	5070	4817	253	
	VI	90	166	5	74700	70965	3735	
	VII	90	166	5	74700	70965	3735	
	VIII	90	166	5	74700	70965	3735	
	IX	90	166	5	74700	70965	3735	
TOTAL					309470	293998	15472	32
XY-EF	I	31	47	1				1457
	II	31	14	5	2170	2062	108	
	III	41	47	5	9635	9153	482	
	IV	41	72	5	14760	14022	738	
	V	116	158	5	91640	87058	4582	
	VI	119	158	5	94010	89310	4700	
	VII	119	158	5	94010	89310	4700	
	VIII	119	158	5	94010	89310	4700	
	IX	119	158	5	94010	89310	4700	
TOTAL					494245	469535	24710	1457
GRAND TOTAL					1085740	1031457	54283	2329

Gravel = 2329 cu.m
 Total Geological Reserves in ROM = 1085740 cu.m
 Recoverable Reserves @ 95% = 1031457 cu.m
 Mine Waste @ 5% = 54283 cu.m

C. MINEABLE RESERVES:

The Mineable reserves are calculated by deducting 7.5m & 10.0m Safety distance and Bench Loss. The Mineable Reserve is calculated upto a depth of 41.0m (1.0m Gravel + 40.0m Rough Stone)

Table No.8

MINEABLE RESERVES								
Section	Bench	L(m)	W(m)	D(m)	Volume In M3	Mineable Reserves in m3 @ 95%	Mine Waste in m3 @ 5%	Gravel in m3
XY-AB	I	23	8	1				184
	II	37	29	5	5365	5097	268	
	III	49	62	5	15190	14431	759	
	IV	75	52	5	19500	18525	975	
	V	70	42	5	14700	13965	735	
	VI	65	32	5	10400	9880	520	
	VII	60	22	5	6600	6270	330	
	VIII	55	12	5	3300	3135	165	
TOTAL					75055	71303	3752	184
XY-CD	I	1	17	1				17
	II	1	41	5	205	195	10	
	III	1	36	5	180	171	9	
	IV	13	52	5	3380	3211	169	
	V	13	47	5	3055	2902	153	
	VI	90	130	5	58500	55575	2925	
	VII	90	120	5	54000	51300	2700	
	VIII	90	110	5	49500	47025	2475	
	IX	90	100	5	45000	42750	2250	
TOTAL					213820	203129	10691	17
XY-EF	I	23	26	1				598
	II	23	1	5	115	109	6	
	III	28	25	5	3500	3325	175	
	IV	23	45	5	5175	4916	259	
	V	93	120	5	55800	53010	2790	
	VI	91	110	5	50050	47548	2502	
	VII	86	100	5	43000	40850	2150	
	VIII	81	90	5	36450	34628	1822	
	IX	76	80	5	30400	28880	1520	
TOTAL					224490	213266	11224	598
GRAND TOTAL					513365	487698	25667	799

Gravel = 799 cu.m

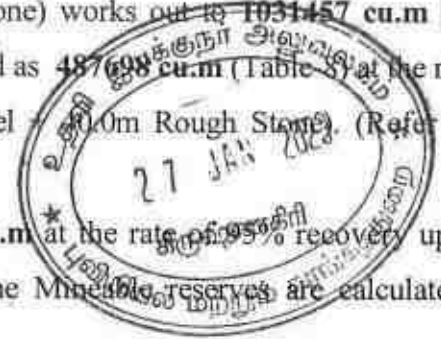
Total Mineable Reserves in ROM = 513365 cu.m

Recoverable Reserves 95% = 487698 cu.m

Mine Waste @ 5% = 25667 cu.m

The geological reserves computed based on the geological cross sections up to the economically workable depth of 41.0m (1.0m Gravel + 40.0m Rough Stone) works out to ~~1031457~~ **487698 cu.m** (95% recovery) (Table-7) and mineable reserves have been computed as **487698 cu.m** (Table-8) at the rate of 95% recovery upto a depth of depth of 41.0m (1.0m Gravel + 40.0m Rough Stone). (Refer plate No.VII, VII-A & VII-B).

Mineable reserves have been computed as **487698 cu.m** at the rate of 95% recovery up to a depth of **41.0m (1.0m Gravel + 40.0m Rough Stone)**. The Mineable reserves are calculated by deducting 7.5m & 10.0m Safety distance & Bench Loss.



2.0 MINING

A. Open Cast Mining

a) Briefly describe the existing as well as proposed method for excavation with all design parameters indicating on plans /sections:-

Existing method :

The mining operations are done by opencast semi-mechanized methods with jack hammer drilling and blasting, hydraulic excavators are used for loading the Rough stone from pithead to the needy crushers.

There is only one existing working pit, the dimension of which is given below :

Table No.9

Existing Pit Details
210.0m(L)Avg X 97.0m (W) Avg X 20.0m (D)

Proposed method :

The quarry is proposed to carry out mining operation with semi-mechanized opencast method ("B2" category of small mine). The quarry operation involves shallow jack hammer drilling, slurry blasting, excavation, loading and transportation of Rough Stone.

As Instructed in the Environmental Clearance, the working hours were restricted between 7AM & 5PM (Present working hours 8AM to 4PM with a total working hours of 8 hours including lunch break). The operation will be confined to general shift only ie. from 8.00 AM to 4.00 PM with one hour lunch interval between 12.00 PM to 1.00 PM.

In Gravel, a bench will be 1.0m height and width with 45° slope.

The Rough Stone, totally eight benches will be of 5.0m height and 5.0m width for next Five years only. Please refer Plate No.IV, IV-A & IV-B. The advancement of the pit will be from boundary towards middle side of the lease area for the next Five years. Please refer Plate No.IV.

A bund will be constructed around the pit to prevent accident call and inrush of rainwater. Proper footpaths are provided between benches for easy accessibility for workers.

Haul roads, to conform to statutory standards are made according to convenience for smooth transport of Rough stone and waste. Wherever necessary, crossing platforms are provided in the haul roads at suitable point for safe crossing as tractors, tippers, trucks etc.,

The Gravel formation will be removed and hydraulic excavators are used for loading the gravel into the tipper from pit head to needy buyers. This will be done only after obtaining permission and paying necessary seigniorage fees to the Government.

Average annual production is about 97540 cum of Rough Stone with 300 working days in a year. Considering the nature of the deposit and the anticipated daily production level, semi-mechanized mining is proposed.

A boundary barrier of 7.5m & 10.0m width are maintained as per statute. Rough Stone locked up in this barrier will be excavated after obtaining permission from DGMS under Regulation 111 of Mines and Mineral Regulation, 1961. The sequence of working for the next Five years is indicated in Plate Nos. IV and the rate of production is given in Table No.11.

b) Indicate Year-Wise Tentative Excavation in Cu.m indicating Production & development, ROM, pit wise as in table below.

i) Planned Development for next Five years is given below :

Gravel of the lease area is $799m^3$. Gravel formation will be removed and hydraulic excavators are used for loading the gravel into the tipper from pit head to needy buyers. This will be done only after obtaining permission and paying necessary seigniorage fees to the Government.

ii) Planned Production for next Five years is given below :

The proposed rate of production of **Rough Stone** is about **487698 cu.m** for **Five Years** at the rate of 95% recovery up to **41.0m** depth (1m Gravel + 40m Rough Stone).

Table No.10

Year	ROM Cu.m	Production 95% (cu.m)
31.05.2023 - 30.05.2024	126165	119857
31.05.2024 - 30.05.2025	118950	113003
31.05.2025 - 30.05.2026	103600	98420
31.05.2026 - 30.05.2027	89250	84788
31.05.2027 - 30.05.2028	75400	71630
TOTAL	513365	487698

From Total ROM the Rough Stone deposits are categorized with the following percentage.
Rough stone : 95% .

The average production of Rough Stone per year will be about 97540 cu.m. Please refer Table No.11 and Plate No.IV.

YEARWISE DEVELOPMENT & PRODUCTION SCHEDULE FOR NEXT FIVE YEARS

The proposed rate of production of **Rough Stone** is about 487698cu.m for Five Years. The average proposed rate of production of **Rough Stone** is about 97540cu.m, at the rate of 95% recovery up to a **41.0m** depth (1m Gravel + 40m Rough Stone).

The proposed Production & development for next Five years 2023-2024 to 2027-2028 are given below :

Table - 11

YEARWISE DEVELOPMENT AND PRODUCTION										
YEAR	Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Recoverable Reserves in m3 @ 95%	Mine waste in m3 @ 5%	Gravel in m3	
31-05-2023 to 30-05-2024	XY-AB	I	23	8	1				184	
		II	37	29	5	5365	5097	268		
		III	49	62	5	15190	14431	759		
		IV	75	52	5	19500	18525	975		
		V	70	42	5	14700	13965	735		
	XY-CD	I	1	17	1					17
		II	1	41	5	205	195	10		
		III	1	36	5	180	171	9		
		IV	13	52	5	3380	3211	169		
		V	13	47	5	3055	2902	153		
	XY-EF	I	23	26	1					598
		II	23	1	5	115	109	6		
		III	28	25	5	3500	3325	175		
		IV	23	45	5	5175	4916	259		
		V	93	120	5	55800	53010	2790		
TOTAL						126165	119857	6308	799	
31-05-2024 to 30-05-2025	XY-AB	VI	65	32	5	10400	9880	520		
	XY-CD	VI	90	130	5	58500	55575	2925		
	XY-EF	VI	91	110	5	50050	47548	2502		
TOTAL						118950	113003	5947		
31-05-2025 to 30-05-2026	XY-AB	VII	60	22	5	6600	6270	330		
	XY-CD	VII	90	120	5	54000	51300	2700		
	XY-EF	VII	86	100	5	43000	40850	2150		
TOTAL						103600	98420	5180		
31-05-2026 to 30-05-2027	XY-AB	VIII	55	12	5	3300	3135	165		
	XY-CD	VIII	90	110	5	49500	47025	2475		
	XY-EF	VIII	81	90	5	36450	34628	1822		
TOTAL						89250	84788	4462		
31-05-2027 to 30-05-2028	XY-CD	IX	90	100	5	45000	42750	2250		
	XY-EF	IX	76	80	5	30400	28880	1520		
TOTAL						75400	71630	3770		
GRAND TOTAL						513365	487698	25667	799	

Gravel = 799 cu.m
 Total Reserves = 513365 cu.m
 Recoverable Reserves @ 95% = 487698 cu.m
 Mine Waste @ 5% = 25667 cu.m

ROM: The material excavated from mineralized zone and includes mineral reject and useable mineral component.

OB: Means overburden capping waste.

iv) Estimated Life of the quarry

Mineable ROM

Mineable Reserves @ 95%

Average production (Rough Stone) per year @ 95%

Estimated Life of the Quarry



Life = 5 years

The average proposed rate of production of Rough Stone is about **97540 cu.m** per year.

v) Proposed Rate of Production When The Quarry Is Fully Developed

The proposed rate of production when the quarry is fully developed is **487698m³** for next Five years and **97540m³** per annum. (Table-11) The production schedule for the subsequent five year is drawn mainly in consideration of reserves position, market demand and the cost of production.

vi) Mineable Reserves and Anticipated Life of Mine

The Rough Stone is Massive in nature. The depth persistence of the Rough Stone will be beyond the economically workable depth. An optimum depth of 41.0m (1.0m Gravel + 40.0m Rough Stone) for entire lease period has been established as economically viable depth. Eventually this depth is the optimum depth for safe and scientific quarrying.

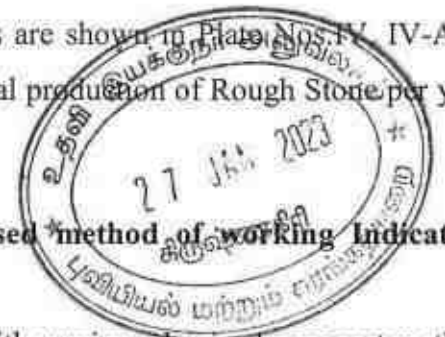
The mineable reserves are calculated by excluding the mining loss due to formation of benches, ultimate depth of mine, the mineral reserve held up within the safety distances all along the boundary of quarry lease applied area.

The mineable reserves for this Rough stone is thus arrived as **487698cu.m** (Table-8) for an assumed depth of 41.0m from top surface (1.0m Gravel + 40.0m Rough Stone). The details of estimation of five years development & production plan (plate no. IV) is furnished in Table-11. The average rate of production of Rough Stone from this quarry is **97540 cu.m** per year and mineable recoverable reserves **487698cu.m**.

Based on the above, and taking into consideration of the available Mineable Reserves, **the life of mine will be about 5 years**, if the quarry is being worked continuously with prevailing market conditions and according to this Scheme of mining period.

c). Composite development plans showing pit layouts, dumps, stacks of mineral reject, if any, etc. and year wise sections in case of 'B' category mines:

A composite development year wise Plan and Sections are shown in Plans Nos. IV, IV-A & IV-B. The details are furnished in Table-11. The average annual production of Rough Stone per year will be about 97540 cu.m.



d). Describe briefly giving salient features of the proposed method of working indicating Category of mine:

The quarry is proposed to carry out mining operation with semi-mechanized opencast method ("B2" category of small mine). The quarry operation involves shallow jack hammer drilling, slurry blasting, excavation, loading and transportation of Rough Stone. The removal of blasted Rough Stone material is loaded into 10 MT capacity trucks with the help of hydraulic excavators.

Extent of Mechanization:

The mine will be worked by semi-mechanized method. However for drilling and hauling, jack hammers, hydraulic excavators and tippers will be used respectively.

Drilling Machines :

Drilling of shot holes will be carried out using compressor and jack hammer. Depth of holes shall be 1 to 2m bench height and spacing shall be 0.75m and burden shall be 0.60m from the preface. Details of drilling equipments are given below.

Table No.12

Type	Nos	Dia of hole	Size / Capacity	Make	Motive power	H.P.
Jack Hammer	5	25.5 mm	Hand held	Atlas copco	Diesel	60

Loading Equipment:

Loading of rough stone shall be carried out by 10 tonne capacity tippers by Hydraulic Excavator from the working place periodically. Details of loading equipment are given as under.

Table No.13

Type	Nos	Bucket Capacity (MT)	Make	Motive power	H.P.
Hydraulic excavator	2	1.2 M ³	L&T or Ex200	Diesel	120

Transportation:

Transport of raw materials and waste shall be done by Tipper of 10 M.T. capacity.

Table No.14

Type	Nos	Size / Capacity	Make	Motive power	H.P.
Tipper	3	10 M.T	Ashok Leyland	Diesel	110

Miscellaneous :

There is no other miscellaneous operation worth mentioning except drilling by jack hammer, working of Rough stone deposit by opencast semi-mechanized methods, transport of Rough stone by tippers and trucks and pumping out seepage water during rainy season.

Afforestation :

The safety distance along the boundary has been identified to be utilized for afforestation purpose. Yearly 100 Neem trees will be planted in this lease area. These trees will be planted along the boundary line, (Please refer Plate No.V for Mine layout, Land use and Afforestation Plan).

The soil will be spread over the same and vegetative cover with suitable species will be provided. The extent of area to be afforested in next Five years is 0.56.0 Ha. interval between trees – 5m, survival rate – 50%. A retaining wall will be constructed around the dumping yard.

The Afforestation programme for the next Five years are described as follows :

Table No. 15

Year	Name of the species	No. of species	Interval	Area in Ha.	Survival rate
2023-2024	Neem	100	5m	0.11.0	50%
2024-2025	Neem	100	5m	0.11.0	50%
2025-2026	Neem	100	5m	0.11.0	50%
2026-2027	Neem	100	5m	0.11.0	50%
2027-2028	Neem	100	5m	0.12.0	50%
TOTAL		500		0.56.0	

e). Describe briefly the layout of mine workings, pit road layout, the layout of faces and sites for disposal of Topsoil/waste along with ground preparation prior to disposal of waste, reject etc. A reference to the plans and sections may be given. UPL or ultimate size of the pit is to be shown for identification of the suitable dumping site:

The quarry is proposed to carry out mining operation with semi-mechanized opencast method ("B2" category of small mine). The quarry operation involves shallow jack hammer drilling, slurry blasting, excavation, loading and transportation of Rough Stone.

As Instructed in the Environmental Clearance, the working hours were restricted between 7AM & 5PM (Present working hours 8AM to 4PM with a total working hours of 8 hours including lunch break). The operation will be confined to general shift only ie. from 8.00 AM to 4.00 PM with one hour lunch interval between 12.00 PM to 1.00 PM.

The Rough Stone, totally eight benches will be 5.0m height and 5.0m width for next Five years only. Please refer Plate No.IV & IV-A. The advancement of the pit will be from boundary towards middle side of the lease area for the next Five years. Please refer Plate No.IV.

A bund will be constructed around the pit to prevent accident and inrush of rainwater. Proper footpaths are provided between benches for easy accessibility for workers.

Haul roads, to conform to statutory standards are made according to convenience for smooth transport of Rough Stone and waste. Wherever necessary, crossing platforms provided in the haul roads at suitable point for safe crossing as tractors, tippers, trucks etc.

Gravel formation will be removed and hydraulic excavators are used for loading the gravel into the tipper from pit head to needy buyers. This will be done only after obtaining permission and paying necessary seigniorage fees to the Government.

Average annual production is about 97540 cum of Rough Stone with 300 working days in a year. Considering the nature of the deposit and the anticipated daily production level, semi-mechanized mining is proposed.

A boundary barrier of 7.5m & 10.0m width will be maintained as per statute. Rough Stone locked up in this barrier will be excavated after obtaining permission from DGMS under Regulation 111 of Mines and Mineral Regulation, 1961. The sequence of working for the next Five years is indicated in Plate Nos. IV & VII and the rate of production is given in Table No.11.

f) Conceptual Mine planning upto the end of lease period taking into consideration the present available reserves and resources describing the excavation, recovery of ROM, Disposal of waste, backfilling of voids, reclamation and rehabilitation showing on a plan with few relevant sections:

Conceptual Mining Plan :

Conceptual mining plan is prepared with an object of long-term systematic development of benches, lay outs, selection of permanent ultimate pit limit, depth of quarrying and ultimate pit, selection of sites for construction of infrastructure etc.,

While making the Conceptual Mining Plan and deciding the ultimate pit limits the following factors are considered.

i) Pit dimension :

a. Table No:16

	PIT
Length(m)	287.0
Width (m) Avg	121.0
Depth (m)	41.0

01. Boundary Barriers

In this case a barrier of 7.5m and 10.0m is left along the lease boundary.

02. Depth of Mining :

The depth of mining is about 41.0m (1.0m Gravel + 40.0m Rough Stone).

03. No. of benches :

The no. of benches will be nine including the Gravel bench.

04. Size and slope of benches :

In Gravel, the bench height will be 1.0m with 45° slope.

In Rough Stone, the bench 5.0m height and width 5.0m for next Five years.

05. Nature of Topsoil :

The nature of the soil in this area is gravelly soil. The top most gravelly soil, this layer which is thickness of about 1.0m from general ground level.

06. The size of the lease hold :

The lease area has an extent of 4.00.0Ha.

07. Nature of ore body :

In the area Rough Stone is of massive deposit and without much of geological disturbances.

i) The ultimate pit limits will be :

Ultimate pit limits have been marked in the Conceptual Mining Plan.

Table No. 17

	PIT
Length(m)	287.0
Width (m) Avg	121.0
Depth (m)	41.0

01. Area already worked out – Plate No.III : 2.50.0 Ha.

02. The outline of the area to be worked out in the next Five years : 3.42.0 Ha.

Plate No. IV.

03. Yearwise area to be planted for next Five years –Plate No.IV. : 0.56.0 Ha.

04. Extent of areas occupied by roads, site services, etc., - Plate No.V. : 0.02.0 Ha.

Table No. 18

Sl. No.	Description	Present Area (Ha.)	Area in use during the quarrying period (Ha.)
01.	Area under Quarrying	2.50.0	3.42.0
02.	Infrastructure	Nil	0.01.0
03.	Roads	0.01.0	0.01.0
04.	Green Belt & Dump	0.01.0	0.56.0
05.	Unutilized Area	1.48.0	Nil
	TOTAL	4.00.0	4.00.0



Ultimate pit boundaries:

Ultimate pit limits have been marked in the Conceptual Plan in Plate Nos.VII

ii) Waste dumps :

The mine waste (5%) will be dumped in the North, East and Southern Side of 7.5m boundary barrier of the lease area.

Table No. 20

Proposed Mine Waste Dump Dimensions:
649.0m(L) x 7.5m(W) x 5.27m (H)= 25667 M ³



100 Neem trees/per year is to be afforested all sides of the boundary barrier.

The Gravel formation will be removed and hydraulic excavators are used for loading the gravel into the tipper from pit head to needy buyers. This will be done only after obtaining permission and paying necessary seigniorage fees to the Government.

Blasting Pattern:

The massive formation shall be broken into pieces of portable size by drilling and Proposed Control Blasting using jack hammers and shot hole Blasting. Power factor of explosives for breaking such hard rock shall be in the order of 6 to 7 tonnes per K.g of explosives.

Proposed Control Blasting parameters are as follows.

Table No.19

Diameter of the hole	:	32-36 mm
Spacing	:	60 Cms
Depth	:	1 to 1.5m
Charge / Hole	:	D.Cord with water or 70 gms of gun powder or Gelatine.
Pattern of hole	:	Zig Zag
Inclination of hole	:	70 ⁰ from the horizontal.
Quantity of rock broken	:	0.45 MT x 2.6 = 1.17 MT
Control Blasting efficiency @ 90%	:	1.17 x 90% = 1.05MT / hole
Charge per hole	:	140 gms of 25mm dia cartridge
Quantity of rock broken per day	:	325.13M ³ .

b) During dry season, Nitrate mixture as base charge and any conventional type of explosives as booster charge will be used:

In rainy season, it is preferable to use only conventional type of explosives like slurry based explosives. Since it is a small mine and the working of the mine is also seasonal, drilling will be done by contractors and supply of explosives will be done by authorized dealer. However, blasting will be done by a qualified mate or Blaster.

c) Secondary Blasting:

Secondary blasting is not needed, since the primary blasting itself will take care of the required fragmentation of waste rock and mineral body.

d) Storage of Explosives:

The explosive shall be supplied by the authorized contractor at the blasting site at the time of blasting. The explosive shall be directly used so no storage of explosive is proposed.



e) Safety Precautions:

1. During handling all care shall be taken that no inflammable elements should be there.
2. Only safety explosive container with explosive license shall be used for safe and secure transportation of explosive.
3. Efficient Siren will be blown prior to the blasting & after clearance of blasting.

f) Underground Mines :

Not applicable.

3.0 MINE DRAINAGE

The area is a slightly elevated topography. Rain water finds its natural coarse. The water table is touched at a depth of 82m in summer and at 76m in NE monsoon. The water table fluctuation is verified by observing the water levels in the above seasons in the nearby wells.

During the mining of Fourteenth benches, it may be necessary to pump out water. A 5 HP pump can easily deal rain water and seepage water and keep the mine dry. The pumped out water will be left out far away from the Northeastern boundary.

a. Depth of Mining:

The working in Rough Stone will reach a depth of 41.0m (1.0m Gravel + 40.0m Rough Stone in the next Five years.

b. Quantity and quality of water likely to be encountered:

In the next Five years, the water table will not pose any problem. However, to deal with storm water and seepage water, a diesel pump of 5 HP capacities is proposed.

In future, proper dewatering pumping arrangements to be made from pit bottom to nearby agricultural lands.

c. Describe regional and local drainage pattern. Also indicate annual rain fall, catchments area, and likely quantity of rain water to flow through the lease area, arrangement for arresting solid wash off etc.

Ground water is the main source in this area, apart from rain in the monsoon period. The water table is at a depth of 82m in summer and at 76m in rainy season. The ground water will be collected in the sump for the deposition of solid particles. Once the suspended particles are deposited it will be pumped out for domestic purpose, dust suppression system, gardening and Afforestation purpose. The excess water only will be pumped out to the ponds/closer water bodies-pond after the deposition of solid particles. There are no toxic elements found in the sump water.

To cope up with storm water and seepage water, an energy efficient electrical pump of 5 H.P capacity will be installed and the discharge will be left-out in the nallah/pond. Garland drains will be made all along the periphery of dumpsites to prevent the water carrying the wash-offs from the dumps. The water collected in the garland drains will flow towards a settling tank formed near by the dumpsite.

The water will be allowed to settle the wash offs from the dumps in the settling tank and pure and clear water will be utilized for Afforestation purposes and for haul roads arrest the dust generation.

4.0. STACKING OF MINERAL REJECT /SUB GRADE MATERIAL AND DISPOSAL OF WASTE

a) Indicate briefly the nature and quantity of Topsoil, Topsoil/waste and Mineral Reject to be disposed off.

Topsoil:

The Topsoil is gravelly soil. It occurs to a depth of 1.0m. The generation of Gravel for next Five years is about 799M³. Gravel formation will be removed and hydraulic excavators are used for loading the gravel into the tipper from pit head to needy buyers. This will be done only after obtaining permission and paying necessary seigniorage fees to the Government.

Sideburden:

There is no sideburden in this lease area.

Sub-grade Mineral:

There is no Sub-grade Mineral produced in the next Five years.

Mineral reject:

The mine waste(5%) will be dumped in the North, East & Southern side boundary barrier of the lease area.

Proposed Mine Waste Dump Dimensions:
649.0m(L) x 7.5m(W) x 5.27m (H)= 25667 M ³

b) The proposed dumping ground within the lease area be proved for presence or absence of mineral and be outside the UPL unless simultaneous backfilling is proposed or purely temporary dumping for a short period is proposed in mineralized area with technical constraints & justification.

Construction of garland drain in around the pit and dump and settling tank will be provided to guard against the heavy rainwater.

Periodically sprinkling/spraying water on roads leading from working face to waste dump, so that areas are always kept wet to prevents emission of air borne dust. Retaining wall will be constructed around the pit.

c) Attach a note indicating the manner of disposal of waste, configuration and sequence of year wise buildup of dumps along with the proposals for protective measures.

The dumping of waste material, will be done steps to avoid sliding. One end of the waste dump to be matured for stabilization will be taken up for Afforestation.

Construction of garland drain in and around the pit. Settling tank will be provided to guard against the heavy rainwater.

Periodically sprinkling/spraying water on roads, so these areas are always kept wet to prevent emission of air borne dust.

Retaining wall and garland drain will be constructed around the pit. Afforestation programme will be carried out.

5.0 USE OF MINERAL AND MINERAL REJECT:

a) Describe briefly the requirement of end-use industry specifically in terms of

The entire mined out mineral is been utilized by the nearby Crusher unit in Krishnagiri.

b) Give brief requirement of intermediate industries involved in up gradation of Mineral before its end-use:

There is no intermediate industries involved for up gradation of Mineral.

c) Give detail requirements for other industries, captive consumption, export, Associated industrial use etc:

Not Applicable.

d). Physical specifications:

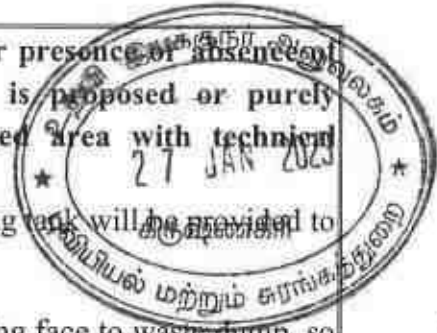
Rough stone texture is medium to coarse grained and is composed of recrystallized minerals, hence it is a metamorphic rock. The grains are subhedral, inequigranular, with a granoblastic texture. The grains are crystalline ie. Complete crystallization has occurred. Cleavage is absent. The color is dark olive green.

Supply of buyers :

Used in nearby Crusher units at Krishnagiri.

e) Give details of processes adopted to upgrade the ROM to suit the user Requirements:

Not applicable.



6.0 PROCESSING OF ROM AND MINERAL REJECT :

a) If processing / beneficiation of the ROM or Mineral Reject is planned to be conducted, briefly describe nature of processing / beneficiation. This may indicate size and grade of feed material and concentrate (finished marketable product), recovery etc.

The minerals produced from the mines need only specific sorting & grading for Size, Grade & Recovery factor. No mineral beneficiation processing is involved. Besides there is no other processing or beneficiation is required for upgrading.



Mineral Beneficiation of Mineral :

Not applicable, no beneficiation is being carried out at the mine. Since the entire mineral was supplied in raw form.

Beneficiation Test Done On Sub-Grade Mineral:

Not applicable, since no sub-grade mineral is anticipated.

b) Give a material balance chart with a flow sheet or schematic diagram of the Processing procedure indicating feed, product, recovery, and its grade at each stage of processing:

Not applicable.

c) Explain the disposal method for tailings or reject from the processing plant:

Not applicable.

d) Quantity and quality of tailings /reject proposed to be disposed, size and capacity of tailing pond, toxic effect of such tailings, if any, with process adopted to neutralize any such effect before their disposal and dealing of excess water from the tailings dam:

Not applicable.

e) Specify quantity and type of chemicals if any to be used in the processing plant:

Not applicable.

f) Specify quantity and type of chemicals to be stored on site / plant:

Not applicable.

g) Indicate quantity (cum per day) of water required for mining and processing and sources of supply of water, disposal of water and extent of recycling:

Water balance chart may be given.

Not applicable.

7.0. OTHERS:

a. Site Services :

The proposed site services are:

Drinking water, rest shed, store room, public convenience etc., mines office and blaster shelter etc. please refer Plate Nos.IV, V, VII and VIII.



Employment Potential:

i) Skilled Labour:

Foreman/ Part time Mining Engineer	:	1
Excavator operator	:	2
Co- operator	:	2
Jack hammer operator	:	6
Blaster/mate	:	1

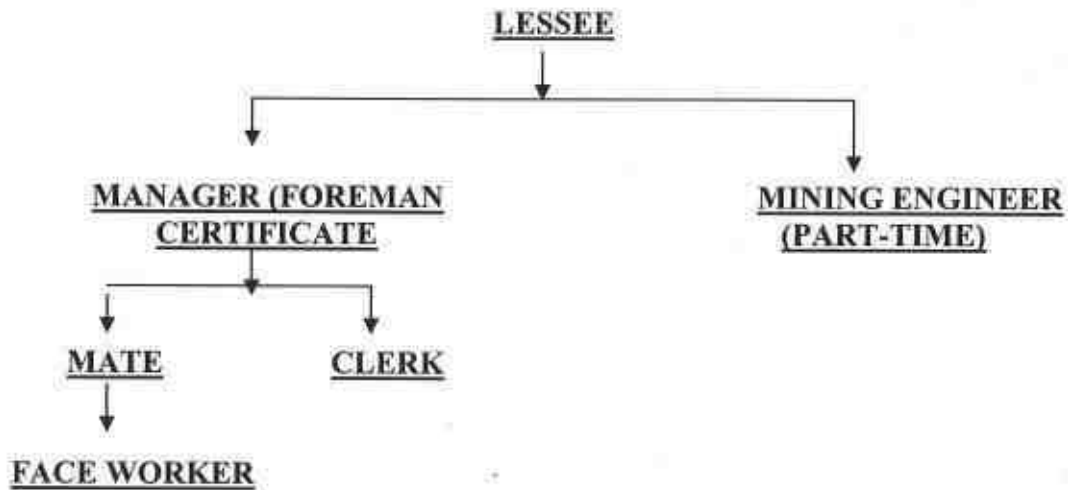
ii) Semi-skilled: : 3

watchman : 1

iii) Unskilled helper Muzdoor : 5

Total : 21 Nos.

The proposed organization chart :



The drilling will be done by contractors. The mine will work in a single shift from 8.00 AM to 4.00 PM with one hour lunch interval between 12.00 Noon and 1.00 PM.

8.0 PROGRESSIVE MINE CLOSURE PLAN

INTRODUCTION

Name of the Mine : Kothapetta Rough Stone Quarry
Lessee : M/s. Sri Devaraajaa 'M' Sand
Address : M/s. Sri Devaraajaa 'M' Sand,
D.No.58B, Gandhi Nagar,
Krishnagiri Town,
Krishnagiri District - 635 001.
Tamil Nadu.



Location :

Extent : 4.00.0 Ha.
S.F.Nos. : 78/1A (P) & 78/1B (P)
Village : Kothapetta
Taluk : Krishnagiri
District : Krishnagiri

Type of Lease Area : Patta Land- Non-Forest area
Present land use pattern : Quarrying of Rough Stone
Method of Mining : Semi-mechanized
Mineral processing operation : Nil

8.1 Environment Base line information: Attach a note on the status of baseline

Information with regard to the following:

Existing land use pattern:

Table No:20

Sl. No.	Description	Present Area (Ha.)	Area in use during the quarrying period (Ha.)
01.	Area under Quarrying	2.50.0	3.42.0
02.	Infrastructure	Nil	0.01.0
03.	Roads	0.01.0	0.01.0
04.	Green Belt & Dump	0.01.0	0.56.0
06.	Unutilized Area	1.48.0	Nil
	TOTAL	4.00.0	4.00.0

Water Regime

Ground water is touched at a depth of 82m in summer and at 76m in NE monsoon season. The average rainfall is 800-900mm. There is no lake, reservoir or river near the area. Villagers use open well water for drinking and other domestic purposes for ages without any adverse health effects. However drinking water will be supplied from the public water supply system from nearby hamlets.

Air-Quality:

The air quality will be affected during the quarrying period due to blasting and jack hammer drilling, which will be within permissible limits. Since this is an open area, the impact on air quality will be to the minimum. The mine roads will be sprinkled with water before starting the transportation of rough stone and wastes to minimize air pollution.

Noise Level:

Quarrying of Rough Stone had been carried out by drilling and control blasting by using low power explosives, and hence, noise will be very minimum.

Flora and Fauna

Since the sub-seed area is a stony waste, it does not contain much vegetation. There is no report of existence of wild animals in this region.

Climate Conditions

The area receives rainfall of about 800mm to 900mm per annum and the rainy season is mainly from October-January during North East Monsoon. The summer is hot with maximum temperature of 38⁰C and winter encounters a minimum temperature of 18⁰C.

Human Settlement

The hamlets near the area are: Table No:21

Name of Hamlet	Population	Direction from the area	Distance
Kallukurikki	240	N	1.5 kms.
Kathinayanapalli	250	E	3.6 kms.
Bayanapalli	280	W	2.0 kms.
Krishnagiri	680	S	2.0 kms.

Public building, Places of worship and Monuments

There is no public building, places of worship or archaeological or national monuments near the area. There is no wild life or bird sanctuary or no reserve or any protected social forest closer to the area.

8.2 Impact Assessment: Attach an Environmental Impact Assessment Statement Describing the impact of mining and beneficiation on environment on the following:

a) Environmental Impact Assessment Statement:

The factors that should be covered in this Para are: -

01. Land
02. Air Quality
03. Water Quality
04. Noise Levels
05. Vibration Levels
06. Water Regime
07. Socio-Economics
08. Historical Monuments etc.



Land:

It is a working mine. There is no proposal for back filling and reclamation. Before closure of the mine, a parapet wall will be constructed to prevent inadvertent entry of cattle and human beings. The dumps will be vegetated to prevent sliding. After closure of the mine, the pit will be allowed to collect seepage and rain water.

This will help to charge the nearby agricultural wells. Fish forming will also be attempted.

Afforestation will be attempted in the boundary barrier.

Air-Quality:

The air quality will be affected during the quarrying period due to blasting and jack hammer drilling, which will be within permissible limits. Since this is an open area, the impact on air quality will be to the minimum. The mine roads will be sprinkled with water before starting the transportation of rough stone and wastes to minimize air pollution.

Water Quality:

Mining operation will not produce any toxic effluent in the form of solid, liquid or gas. The existing water quality will not be affected by mining operation. The Surface rain water flow through the seasonal water course as usual.

Noise Level:

Quarrying of Rough Stone had been carried out by drilling and control blasting by using low power explosives, and hence, noise will be very minimum.

Vibration levels:

The ground vibration will be caused due to movement of earth moving equipment and blasting. But the impact on the environment will be negligible, since the quantity of explosives used will be very small and the movement of equipment will be intermittent.

Water Regime:

Mining operation will not produce any toxic effluent in the form of solid, liquid or gas and will not have any impact on quality of water and also on ground water.

Socio-Economics:

The local population is mostly agriculture based. Agricultural is done on seasonal basis. Mining in this area is an avenue for employment. Mining certainly has created an impact in the Socio-economic standards of the local people. It has improved the life style of the local people and has improve the standard of living.

Historical Monuments:

There is no historical or Archaeological monument near the area. The mining operation does not have any impact on these aspects.

8.3 PROGRESSIVE RECLAMATION PLAN:

Since, it is an existing mine, the only proposal now is to plant 100 Neem trees every year in the boundary barrier. A retaining wall will be constructed around the pit. Please refer Plate Nos.V. The Afforestation programme for the next Five years are described as follows :

Table No. 22

Year	Name of the species	No. Of species	Interval	Area in Ha.	Survival rate
2023-2024	Neem	100	5m	0.110	50%
2024-2025	Neem	100	5m	0.11.0	50%
2025-2026	Neem	100	5m	0.11.0	50%
2026-2027	Neem	100	5m	0.11.0	50%
2027-2028	Neem	100	5m	0.12.0	50%
TOTAL		500		0.56.0	

After complete extraction of mineral, the pit will be allowed to collect rain and seepage water to serve as a reservoir to charge the nearby wells. Fish culture will also be attempted. A bund will be constructed around the pits.

8.3.1. MINED OUT LAND:

It is an existing mining lease. There is no proposal for back filling and reclamation at this stage.

01. The area covered by pits	: 3.42.0 Ha.
02. The area covered by waste dumps & Afforestation	: 0.56.0 Ha.
03. The area covered by roads, infrastructure	: 0.02.0 Ha.
04. Unutilized area	: Nil

8.3.2. Topsoil management:

The Topsoil is Gravel. It will be removed and hydraulic excavators are used for loading the gravel into the tipper from pit head to needy buyers. This will be done only after obtaining permission and paying necessary seigniorage fees to the Government.

8.3.3. Tailing Dam Management

Does not arise.

8.3.4 Acid mine drainage, if any and its mitigative measures.

Not applicable.

8.3.5 Safety And Security

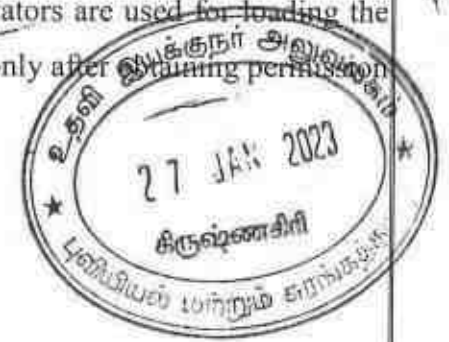
All the quarry workers will be provided with safety equipments like helmets, Mine Goggles, Ear plugs, Ear muffs, Dust mask, reflector jackets and Safety Shoes as personal protective device as per the specification approved by Director of mines safety. Periodically medical checkup will be conducted for all workers for any mine health related problems. Proper training and induction will be given by qualified and experienced safety officer to all employed about the safe and systematic Rough stone quarrying operations. The drillers and workers will be sent for vocational training periodically to carry out the quarrying operations scientifically to safe guard the men machinery and mineral and to create awareness of conventional opencast quarrying operations.

Parapet wall or bund have been constructed on all sides of the openings. Proper pumping arrangements during rainy season. Trees planted all along the mining lease boundary.

8.4 Disaster Management And Risk Assessment

The nearby hamlet is Krishnagiri which is at a distance of 2.0 kms where facilities like District government Hospital etc., are available. Mode of transport available is Jeep. All the employee will be shifted to the nearest hamlet Krishnagiri. Mobile phone will be provided to the Mines Manager. The Manager/Supervisor will be provided with a mobile phone. The Mining area is very small. There is no chance for risk for any disaster. However, the details of contact person are given :

Contact person : M/s. Sri Devaraajaa 'M' Sand,
Postal Address : D.No.58/B, Gandhi Nagar,
Krishnagiri Town,
Krishnagiri District - 635 001.



8.5 Care and maintenance during temporary discontinuance:

In case, of any temporary closure or discontinuance of mining operations, the following steps are proposed.

- Watchman will be posted round the clock to prevent any unauthorized or inadvertent entry of general public.
- Works on stabilization of dumps to provide vegetal cover will be taken up.
- Construction of garland drains in the pit and retaining walls around the dumps will be attempted.



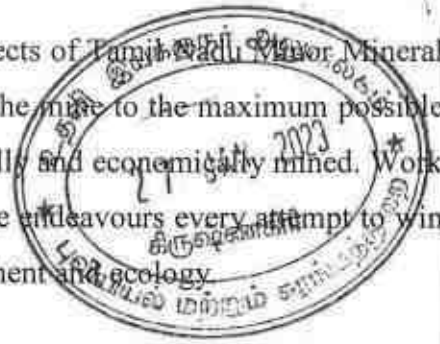
8.6 .Project Cost:

Table No.23

<u>A. Fixed Asset Cost:</u>		
1. Land Cost	:	Rs. 30,00,000/-
2. Labour Shed	:	Rs. 1,40,000/-
3. Sanitary Facility	:	Rs. 90,000/-
4. Fencing cost	:	Rs. 70,000/-
Total=	:	Rs. 33,00,000/-
<u>B. Operational Cost:</u>		
<u>Machinery cost</u>	:	Rs.40,00,000/-
<u>C. EMP Cost:</u>		
Drinking water facility	:	Rs. 1,20,000/-
Safety kits	:	Rs. 80,000/-
Water sprinkling	:	Rs. 70,000/-
Afforestation	:	Rs. 40,000/-
Water quality test	:	Rs. 40,000/-
Air quality test	:	Rs. 40,000/-
Noise/vibration test	:	Rs. 40,000/-
Total=	:	Rs. 4,30,000/-
Total Project Cost(A+B+C)	:	Rs. 77,30,000/-

9.0 Any Other Information:

The Scheme of Mining proposed has fully covered the aspects of Tamil Nadu Minor Mineral Concession Rules with a plan to extend the proposed working of the mine to the maximum possible depth of the deposit. To avoid wastage, the deposit has to be carefully and economically mined. Work persons have to be educated about the value of mineral. The Lessee endeavours every attempt to win mineral economically without wastage and to improve the environment and geology.



S. Dhanasekar
S. DHANASEKAR, M.Sc. (Geo)
Qualified Person

This Mining Plan is approved based on guidelines / instruction issued and in corporation of the particulars specified in the letter Roc. No. 1121/2023 Dated 27/11/2023 of the Deputy Director of Geology and Mining, Krishnagiri and subject to further fulfillment of the conditions laid down under Tamil Nadu Minor Mineral Concession Rules, 1959 and Minor Mineral Conservation and Development Rule 2010.

S. Dhanasekar
DEPUTY DIRECTOR
Geology and Mining
Collectorate, Krishnagiri.

6
27/11/23

This Mining Plan is approved subject to the conditions / stipulation indicated in the Mining Plan Approval

Letter Roc. No. 1127/2023 Dated 27/11/2023

PROCEEDINGS OF THE DISTRICT COLLECTOR, KRISHNAGIRI

Present: Thiru C. Kathiravan, I.A.S.,

Roc.No.418/2017/Mines

Dated 31.05.2018



Sub: Mines and Minerals - Krishnagiri District and Taluk
- Kothapetta Village - S.F.No. 78/1A(part) (1.75.0)
and 78/1B (part) (2.25.0) - Over an extent of 4.00.0
Hects of patta lands - Quarry Lease for Rough Stone
Application preferred by M/s. Devaraajaa .M.Sand,
No. 58B Gandhi Nagar, Krishnagiri - precise area
given to the applicant - Environment clearance
issued - orders issued - reg.

- Ref: 1. Quarry lease application of M/s. Devaraajaa
M.Sand, No. 58B Gandhi Nagar, Krishnagiri
dated 05.08.2017.
2. The District Collector Krishnagiri letter Roc. No.
418/2017Mines-1, dated 10.08.2017 addressed
to the Revenue Divisional Officer, Krishnagiri &
District Forest Officer, Hosur.
3. The Revenue Divisional Officer, Krishnagiri letter
K.Dis 3486/2017/C, dated 03.10.2017.
4. The Deputy Director of Geology and Mining,
Krishnagiri technical report dated 20.11.2017.
5. The Deputy Director of Geology and Mining,
Krishnagiri letter Roc. No. 418/2014/Mines
dated 29.12.2017.
6. The District Level Environmental Impact
Assessment Authority Krishnagiri Lr No. 35
DEIAA-KGI/EC No. 27/2018 Dated 27.02.2018.
7. The Deputy Director of Town and County Paining
Dharmapuri letter No.1654/2017Thama dated
08.01.2018.

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ORDER:

Sri Devaraajaa.M. Sand, No. 588 Gandhi Nagar, Krishnagiri 635001 have applied for the grant of quarry lease to quarry Rough stone for a period of five years over an extent of 4.00.0 hecets. in patta land in. S.F.Nos. 78/1A (part) (1.75.0) and 78/1B (2.25.0) of Kothapetta Village of Krishnagiri Taluk and District vide in their application 1st cited.

2. The Revenue Divisional Officer, Krishnagiri had furnished land availability and inspection report vide in the reference 3rd cited. From her report, the following facts are revealed.

a) The applied area in S.F.Nos. 78/1A over an extent of 2.00.0 Hects. Stands registered in the name of Selvi. A.M. Shivani D/o. Mathiyazhagan, vide patta No. 1515, the applied area in S.F No. 78/1B (part) over an extent of 11.92.0 Hects stands registered in the name of Tmt. K.M.Vijaya W/o D. Madhiazhagan vide patta No. 1521 in Kothapetta Village records. Thiru D. Madhiazhagan and Tmt. K.M. Vijaya are the partners of M/s. Devaraj M. Sand and they have obtained consent for S.F No. 78/1A over an extent of 2.00.0 Hects. From the pattadar Selvi. A.M. Shivani for a period of 29 years from 01.06.2017 to 31.5.2049.

b) There is no residential area, Natham, School Buildings, Place of worship are situated within 300 mts. Radial of proposed from the applied area.

c) There is No Odai, river EB lines, Telephone lines, situated within 50 mts radial distance.

d) There is no objection for the A1 Notice published in Kothapetta Village on 11.08.2017.

e) There is no litigation in the area, and it is not acquired by the Government and it is not registered in the prohibitory area book.

f) Approach road to the area is available from Krishnagiri- Maharajakadai Road through the remaining portion of the patta land S.F No. 78/1B of the applicant.

g) Finally he had recommended for the issue of quarry lease for Rough Stone to the applicant for a period of five years over an extent of 4.00.0 hecets in patta land S.F No. 78/1A (part) (1.75.0) and 78/1B (part) (2.25.0) of Kothapetta Village, Krishnagiri Taluk and District subject to the condition that no quarrying should be carried out in the adjacent Government land and no hinderance should be given to the public.

3) Deputy Director (G&M), Krishnagiri had inspected the area on 17.11.2017 and furnished his technical report vide in the reference 4th cited. From his report the following facts are revealed.

a) The applied area in S.F No. 78/1A (2.00.0 Hect) Stands registered in the name of Selvi A.M. Shivani D/o Mathiyazhagan, vide patta No. 1515 in Kothapetta Village, Records. Selvi A.M. Shivani had given surface rights to the applicant firm vide a lease deed dated 18.06.2016. The applied area in S.F No. 78/1B (11.92.0 Hects) stands registered in the name of Tmt. K.M. Vijaya, W/o D. Mathiyazhagan vide patta No. 1521 in Kottapetta Village, Records. Tmt. K.M. Vijaya, had given surface right to the applicant firm vide a notarized deed for a period of six years from 24.11.2017 to 23.11.2023.

b) The area is situated on the flank of a small mount having a height of 8 mts. Slope of the area towards North and East. Topsoil cover is very meager and observed only interstitial filling of the boulders. Bouldry outcrops area observed all over the area. The Country rock of the area is granitic Gneiss having a general trend of NE-SW

almost vertical dipping. The rock type available in the area is suitable for making rough stone, cut stone and jellys.



- c) The area in virgin.
- d) Approach road to the area is available.
- e) No habitation is situated within 300 meters radial distance from the applied area.

f) Government lands in S.F No. 56/1 is situated on the South side of the applied area. Besides there is no permanent structures area observed within 50 mts radial distance from the applied area.

g) There is no fauna and flora of botanical importance noticed in the applied area. The village in which the lease applied area is situated is not classified as a Hill Village.

h) Four boundaries of the applied area.

S.F.No	North	East	South	West
78/1A (part)	79 (Patta)	78/1A (part) (Patta)	78/2B (part) (patta)	78/2B (part) (Patta)
78/1B (part)	79 (Patta), 78/1A (part) (patta)	78/1A (part) and 78/2B (part) (Patta)	78/2B (part) 56/1n (Govt. Land)	11 (Patta)

e) The details of quarries situated within 500 mts radial distance from the applied area.

Sl. No.	Name of the lessee	Village	S.F.No. Extent in Hect	Extent in Hec	Collector's ProceedingNo. & date	Lease period
1	M/s. Devaraajaaa M.Sand	Kothapetta	78/1A (p) & 78/1B	4.00.0	--	Instant Proposal
2	Tmt. K.M. Vijaya	Kothapetta	78/1B (part)	4.00.0	--	Under process
3	Thiru Ganesan	Kothapetta	56/1 (part-D)	2.54.0	Roc. 611/2009/Mines dated 14.5.2015	14.5.2015 to 13.05.2020
4	S.Sumitha Sankar	Kothapetta	56/1 (part-5)	1.20.0	Roc. No. 49/2016/Mines dated 18.8.2016	01.09.2016 to 31.08.2021
5	Qummarunnisa	Kothapetta	87/1B1 (part) and 87/1B2 (part)	4.75.0	Ro. 08/2013/Mines dated 05.2.2016	2.3.2016 to 01.03.2021
6	A. Madesh	Kothapetta	56/1 (part-C)	3.06.0	Roc. 126/2010/Mines dt. 27.10.2009	3.05.2010 to 02.05.2015
	Total			19.55.0		

j) Finally, he had recommended that, a quarry lease for rough stone may be granted to M/s. Devaraajaaa M.Sand over an extent of 4.00.0 Hectars of patta lands in S.F No. 78/1A (part) and 78/1B (part) of Kothapetta Village Krishnagiri Taluk and District for a period of 5 years from the date of execution of lease deed under the provisions of Rule 19 (1) of Tamil Nadu Minor Mineral Concession Rules 1959, Subject to the following conditions.

1. A safety zone of 7.5 mts should be left out for the adjoining patta lands.
2. A safety zone of 10 mts should be left out for the Government land S.F No. 56/1 situated on the south west of the applied area.

4. As per the amended provisions of Rule 41 & 42 of Tamil Nadu Minor Mineral Concession Rules 1959, the approved mining plan and Environmental Clearance are made mandatory for the grant of quarry lease for minor Minerals also.

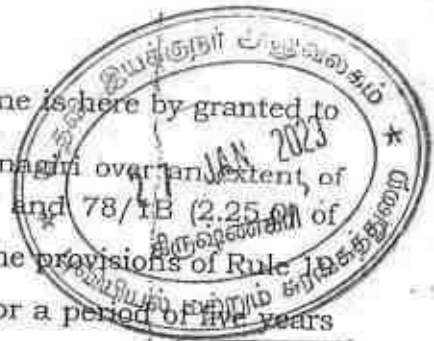
5) Based on the recommendation of the Revenue Divisional Officer, Krishnagiri and Deputy Director (Geology and Mining), Krishnagiri precise area had been given over an extent of 4.00.0 Hects in S.F.Nos. 78/1A (part) and 78/1B (part) of Kothapetta Village, Krishnagiri Taluk and District for the proposed grant of quarry lease for rough stone for a period of five years from the date execution of lease deed subject to certain special conditions in addition to the usual conditions stipulated for rough stone quarry and the applicant had been directed to submit the Approved Mining Plan and Environmental Clearance from the District Level Environmental Impact Assessment Authority, Krishnagiri.

9) The applicant have submitted the approved mining plan approved by the Deputy Director of Geology and Mining vide in the reference 5th cited and the Environment clearance given by the District Level Environment Impact Assessment Authority Krishnagiri in the reference 6th cited.

10) In the Deputy Director of Town & Country Planning Dharmapuri letter RC No. 1654/2017/Tha.ma dated 08.01.2018 it is informed that the lease granted area are classified as "Unclassified area " and if there is no residential area and other constructions are situated within 300 mts. From the said area, there is no objection for the carrying out of quarrying a activity in the area. In the G.O Ms. No. 129 Housing and Urban Development (UD4 (3)) Department dated 08.07.2016 construction of residential, commercial, industrial or institutional or any structure for occupation shall not be allowed within 300 mts from any quarry area is not allowed.

9) Further, the applicant had submitted the paper cuttings in which the grant of Environment Clearance is published in the daily news paper as per the condition imposed by the State Level Environment Impact Assessment Authority.

10) In view of the above a quarry lease for rough stone is here by granted to M/s. Devaraajaaa M. Sand No. 58B Gandhi Nagar, Krishnagiri over an extent of 4.00.0 Hects in patta land S.F.Nos. 78/1A (part) (1.75.0) and 78/1B (2.25.0) of Kothapetta Village, Krishnagiri Taluk and District under the provisions of Rule 105-B of (1) of Tamil Nadu Minor Mineral Concession Rules, 1959 for a period of five years from the date of execution of lease deed subject to the following special conditions and conditions.



- a) A safety zone of 7.5 mts should be left out for the adjacent patta lands.
- b) A safety zone of 10 mts should be left out for the Government land S.F No. 56/1 situated on the south west of the applied area.
- c) At any cost no quarrying should be carried out in the adjacent Government land and no hinderance should be given to the public.
- d) Mining plan shall be prepared by in incorporating all the details as proposed in the Minor Mineral Conservation and Development Rules 2010.
- e) Mining Plan shall be prepared by the in incorporating all the details as proposed in the letter No. SEIAA-TN/Minor Minerals/2012 dated 17.04.2013 of the State Level Environment Impact Assessment Authority, Tamil Nadu.
- f) Quarrying activity should be carried out only from 7.00 A.M to 5.00 P.M.
- g) The grantee should sent the notice for opening of the quarry to the Director General of Mines safety, Bangalore.
- i) Quarrying operation should be carried out only after appointing Mines Manager/Mines Mate and Foremen.
- j) At any cost the blasting activity should be carried out under the Supervision of Mines Mate.
- k). If any accident occur in the quarry area the lessees should give immediate intimation to the Director of Mines safety Bangalore and District Collector, Krishnagiri and lessee is solely held responsible for any violation.
- l) The grantee should remit Rs.10000/- towards security deposit and Rs. 3,000/- towards area assessment in the relevant head of account and submit the original challans.
- m) The grantee should submit the non judicial stamp papers for the value of Rs. 6,05,500/- and to execute the lease deed with the District Collector in the prescribed time limit.

n) The grantee should remit a sum of Rs. 5,00,000 (Rupees five laksh) in the form of fixed deposit Jointly in the name of the District Collector and the grantee and submit the receipt of the fixed deposit caution deposit towards the restoration of the quarried pit.

11) Conditions imposed for rough stone quarrying:

1. குத்தகை காலம், குத்தகை ஒப்பந்தப்பத்திரம் நிறைவேற்றும் நாளிலிருந்து ஐந்து ஆண்டுகளாகும்.
2. குவாரி குத்தகை வழங்கப்பட்ட இடத்தில் குவாரி செய்யும் வேலிக்கல் / குண்டுக்கல் / கட்டுக்கல் / சக்கை மற்றும் ஜல்லி ஆகியவற்றை மேற்படி இடத்திலிருந்து வெளியில் எடுத்துச் செல்வதற்கு முன்பு அவை ஒவ்வொன்றிற்கும் அவற்றிற்குரிய வீதத்தில் சீனியரேஜ் தீர்வை செலுத்தி இவ்வலுவலகத்தில் பர்மிட் மற்றும் நடைச்சீட்டு பெற்ற பின்புதான் மேற்படி கனிமங்களை குவாரியிலிருந்து வெளியில் எடுத்துச் செல்ல வேண்டும். 1959 ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், இணைப்பு II-ல் அடங்கியபோது அரசால் நிர்ணயிக்கப்படும் வீதத்தில் பரப்பு தீர்வை செலுத்த வேண்டும். மேற்கண்ட தொகையைத் தவிர அரசால் அடங்கியபோது நிர்ணயிக்கப்படும் இதர தொகைகளையும் குத்தகைதாரர் செலுத்த வேண்டும்.
3. குத்தகை இடத்திற்கு அருகிலுள்ள குடியிருப்புகள், கட்டடங்கள், நீர்நிலைகள், குளங்களின் கரைகள், மரங்கள், சாலைகள், வண்டிப்பாதைகள், நடைபாதைகள் மற்றும் இதர பொதுச் சொத்துக்களுக்கு பாதுகாப்பு குவாரி செய்ய வேண்டும்.
4. குத்தகை வழங்கப்பட்ட இடத்திற்கு அருகாமையில் உள்ள பட்டாதாரர்கள் மற்றும் பொது மக்களுக்கு பாதுகாப்பு குவாரி செய்ய வேண்டும்.
5. குத்தகை வழங்கப்பட்ட இடத்திற்கு அருகிலுள்ள ரயில்பாதைகள், சாலைகள், மின்சாரம் மற்றும் தொலைபேசி கம்பிகளுக்கு 50 மீட்டரும், குடியிருப்பு பகுதியிலிருந்து 300 மீட்டரும், நடைபாதைகள், கிராம சாலைகளுக்கு 10 மீட்டரும் பாதுகாப்பு இடைவெளி விட்டு குவாரி செய்ய வேண்டும்.
6. மாவட்ட ஆட்சித்தலைவர் (அல்லது) அரசால் அதிகாரம் வழங்கப்பட்ட அலுவலரை குத்தகை வழங்கப்பட்ட இடத்தைப் பார்வையிடவும், குவாரி பதிவேடுகள், ஆவணங்கள் மற்றும் கணக்கை சரிபார்க்கவும் அனுமதிக்க வேண்டும். இது சம்மந்தமாக அவர்கள் கோரும் அனைத்து விவரங்களையும் வழங்க வேண்டும்.
7. சுற்றுப்புற சூழ்நிலை பாதுகாப்பு, கனிம பாதுகாப்பு, தொழிலாளர் பாதுகாப்பு முதலியவற்றைக் கருத்தில் கொண்டு விஞ்ஞான அடிப்படையில் திறமையுடன் முறையாகக் குவாரி செய்ய வேண்டும்.
8. மாவட்ட ஆட்சித்தலைவர் மற்றும் ஆணையர், புலியியல் மற்றும் கரங்கத்துறை, ஆகியோரால் அதிகாரம் வழங்கப்பட்ட அலுவலரை மேலே பத்தி (5)-ல் குறிப்பிட்டுள்ள நிபந்தனைகள் தொடர்பாகவும், மேற்கண்ட அலுவலர்களின் ஆணையை நிறைவேற்றவும் குத்தகை வழங்கப்பட்ட இடத்தைப் பார்வையிட அனுமதிக்க வேண்டும்.
9. குத்தகைதாரரின் செலவில் குத்தகை ஒப்பந்தப்பத்திரம் நிறைவேற்றி அதனை பதிவு செய்வதற்கு முன்பு குத்தகை இடத்தில் குவாரி மற்றும் இது சம்மந்தப்பட்ட வேலைகளைத் தொடங்கக்கூடாது.
10. குத்தகை வழங்கப்பட்டுள்ள இடத்திற்குள் எல்லையிலிருந்து 7.5 மீட்டர் தூரத்திற்குள் குவாரி செய்யக் கூடாது.
11. பொது சாலைகளிலிருந்து குத்தகை வழங்கப்பட்ட இடத்திற்குச் செல்ல பாதை வசதி குத்தகைதாரர் சொந்த பொறுப்பில் செய்து கொள்ள வேண்டும்.
12. குத்தகை ஒப்பந்தப்பத்திரத்துடன் இணைத்துள்ள வரைபடத்தில் காட்டியுள்ள குத்தகை இடத்தைச் சுற்றிலும் எல்லைக்கற்கள் நட்பு அலுவலரைச் சரியானபடி பராமரிக்க வேண்டும்.
13. 1959 ஆம் வருடத்திய தமிழ்நாடு சிறுகனிமச் சலுகை விதிகள் இணைப்பு XII மற்றும் XII-ல் உள்ள படிவங்களில் முறையே இசைவாணைச்சீட்டு மற்றும் நடைச்சீட்டிணைத் தயார் செய்து அவற்றில் மாவட்ட ஆட்சித்தலைவரால் அதிகாரம் வழங்கப்பட்ட அலுவலரின் கையொப்ப முத்திரை மற்றும் அலுவலக முத்திரைகள் பெற்று குவாரியிலிருந்து குண்டுக்கல், கட்டுக்கல், சக்கை மற்றும் ஜல்லி ஆகியவற்றை வெளியில் எடுத்துச் செல்லும் ஒவ்வொரு வாகனத்திற்கும் ஒவ்வொரு நடைக்கும் வழங்கப்பட வேண்டும். குண்டுக்கல், கட்டுக்கல், சக்கைகள், ஜல்லி ஆகியவற்றை ஏற்றிச் செல்லும் ஒவ்வொரு வாகனமும் அதனைச் சோதனைச் செய்வதற்கு அதிகாரம் பெற்ற அலுவலர் சோதனைச் செய்யும்போது நடைச்சீட்டிணைக் காண்பிக்க வேண்டும். இசைவாணைச்சீட்டு மற்றும் நடைச்சீட்டின் நகல்களை குவாரியில் வைத்திருக்க வேண்டும். முறையான இசைவாணைச்சீட்டு மற்றும் நடைச்சீட்டுகள் இல்லாமல் கனிமங்களை ஏற்றிச் செல்லும் வாகனங்கள் 1959-ம் வருடத்திய

- தமிழ்நாடு சிறுகனிமச் சலுகை விதிகள் மற்றும் சுரங்கங்கள் மற்றும் கனிமங்கள் (ஒழுங்குமுறை மற்றும் அபிவிருத்தி) சட்டம், 1957-ன்படி கையாற்றப்பட்டு, குத்தகைதாரர் மீது அபிவிருத்தி எடுக்கப்படுவதுடன் குவாரிக் குத்தகையையும் ரத்து செய்ய நடவடிக்கை எடுக்கப்படும்.
14. குத்தகை வழங்கப்பட்ட இடத்தை குண்டுக்கல், கட்டுக்கல், சக்கை மற்றும் ஜல்லி குவாரி செய்ய மட்டும் பயன்படுத்த வேண்டும். குத்தகை உரிம ஆணை அல்லது குத்தகை ஒப்பந்தப்பத்திரத்தில் தவறுதலாக கனிம விவரம் குறிக்கப்பட்டு இருந்தால் அதனை ரத்து நேரத்திலும் குத்தகைதரருக்கு மாவட்ட ஆட்சியருக்கு அதிகாரம் உண்டு. குத்தகைதாரர் அனுமதியில் எந்த உரிமையும்கோரமுடியாது.
15. மெருகேற்றுவதற்கும், அயல் நாட்டிற்கு ஏற்றுமதி செய்வதற்கும் பயன்படுத்தப்படும் வடிவத்தில் கற்குவாரி செய்யக் கூடாது.
16. குத்தகை ஒப்பந்தப்பத்திரத்தில் குறிக்கப்படாத வேறு ஏதாவதொரு கனிமம் கிடைத்தால், அதனை சம்மந்தப்பட்ட அலுவலரின் அனுமதியைப் பெறாமலும், அதற்குரிய சீனியரேஜ் தொகையைச் செலுத்தாமலும் எடுக்கக்கூடாது. புதிய கனிமம் கிடைத்த விவரத்தை 30 தினங்களுக்குள் தெரிவிக்காமல் எடுத்துச் சென்றால் இக்குற்றத்திற்கு அந்த கனிமத்திற்குரிய சாதாரண சீனியரேஜ் கட்டணத்தைப்போல் 15 மடங்குவரை மாவட்ட ஆட்சித்தலைவரால் அபராதம் விதித்து வசூலிக்கப்படும்.
17. குத்தகை காலம் முடிந்தபிறகு, குத்தகை வழங்கப்பட்ட இடத்திலிருந்து குண்டுக்கல், கட்டுக்கல், சக்கை மற்றும் ஜல்லியை குவாரி செய்து வெளியில் எடுத்துச் செல்ல குத்தகைதாரருக்கு உரிமையில்லை.
18. குத்தகை காலம் முடிவடைந்த பிறகு குத்தகை இடத்தில் எஞ்சின், மெஷின் போன்ற எந்தவிதமான தளவாட பொருட்களையும் வைத்திருக்கக்கூடாது. அவற்றை குத்தகை காலத்தில் கடைசி நாளன்று குத்தகைதாரர் எடுத்துச் சென்றுவிட வேண்டும்.
19. குத்தகையை வேறு எவருக்கும் உள் குத்தகைக்கு விடக்கூடாது.
20. குவாரி செய்வதில் இழப்பு ஏற்படின் நஷ்டஈடு கேட்கக்கூடாது.
21. குவாரியில் வேலை செய்யும் தொழிலாளர்கள் மற்றும் இதர நபர்களுக்கு விபத்து ஏதாவது ஏற்படின் அதற்கு முழுப் பொறுப்பினையும் குத்தகைதாரரைச்சேரும். இதற்கு அரசு பொறுப்பல்ல.
22. அரசுக்கு செலுத்த வேண்டிய தொகையை உரிய காலத்திற்குள் செலுத்தவில்லை என்றால் அத்தொகை 24% அல்லது அரசால் அவ்வப்போது நிர்ணயிக்கப்படும் வீதத்தில் வட்டியுடன் குத்தகைதாரரிடமிருந்து வசூலிக்கப்படும்.
23. அரசுக்கு செலுத்த வேண்டிய பாக்கித் தொகை தமிழ்நாடு வருவாய் வசூல் சட்டம் 1864-ன் கீழ் வசூலிக்கப்படும்.
24. குத்தகை நிபந்தனைகள், 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனிமச் சலுகை விதிகள், அரசு ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, மாவட்ட ஆட்சித்தலைவர் ஆகியோரது ஆணைகள் மீறப்படின் மீறலுக்கு அபராதம் விதிப்பதோடு அல்லாமல் குத்தகைதாரருக்கு நேர்முக விசாரணைக்கு வாய்ப்பளித்த பின்பு குத்தகை உரிமம் ரத்து செய்ய நடவடிக்கை எடுக்கப்படும்.
25. அரசின் அவ்வப்போதைய ஆணைகளுக்கேற்ப நிபந்தனைகளை மாற்றி அமைக்கவோ, நீக்கவோ, கூடுதலாக சேர்க்கவோ, மாவட்ட ஆட்சித்தலைவருக்கு முழு அதிகாரம் உண்டு.
26. மேற்கூறிய நிபந்தனைகளுடன் 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனிமச் சலுகை விதிகள், சுரங்கங்கள் மற்றும் கனிமங்கள் (ஒழுங்குமுறை மற்றும் அபிவிருத்தி) சட்டம் 1957, மாவட்ட ஆட்சித்தலைவர் ஆகியோரால் அவ்வப்போது பிறப்பிக்கப்படும் ஆணைகள் குத்தகைதாரரைக் கட்டுப்படுத்தும்.
27. குவாரிகள்/சுரங்கங்களுக்கு பொருந்தக்கூடிய தொழிலாளர் சட்டங்களுக்கு கட்டுப்பட்டு குத்தகைதாரர் குவாரி செய்யவேண்டும். தவறினால் சம்மந்தப்பட்ட அரசின் சட்டப்பூர்வமான நடவடிக்கைகளுக்கு குத்தகைதாரர் உள்ளாக வேண்டி இருக்கும்.
28. இந்திய வெடிமருந்து சட்டம் 1884 (Central Act IV of 1884)-ன்படி உரிய வெடிமருந்து உரிமம் பெற்று குத்தகைதாரர் பாறைகளை வெடிவைத்து உடைக்க வேண்டும். தவறும் பட்சத்தில் குத்தகைதாரர் கடும்தண்டனைக்கு உள்ளாக வேண்டியிருக்கும்.
29. குத்தகைதாரர் குவாரியில் குழந்தை தொழிலாளர்களை பணியமர்த்தக்கூடாது.

III) a) The conditions imposed by the Tamil Nadu Pollution Control Board in the consent to establishment in Air and Water Pollution Act should be strictly adhered and the consent should be renewed periodically.

b) The Environment Clearance issued by the DEIAA, Tamil Nadu should be renewed within the prescribed time limit.

IV) Conditions imposed.

1. (i) This Environmental Clearance is granted to Mining of Rough stone for the production quantity of 10,50,884 Cbm of rough stone for the period of five years from the date of execution of the mining lease period.

(ii) The approved quantity of rough stone to be quarried = 10,80,884 cbm

(iii) Depth of mining permitted = 71 mts.(25 Mts. Above ground level and 46 mts below ground level) from the period of 5 years.

2.) Conditions to complied before the commencing of mining operation

1. The applicant has to obtain land use classification as industrial use before issue / renewal of mining lease.

2. NOC from the Standing committee of the NBWL shall be obtained, if protected areas are located within 10 km from the proposed project site.

3. The project proponent shall comply the conditions laid down in section V Rule 36 of Tamil Nadu Minor Mineral Concession Rules, 1959.

4. A copy of the Environment Clearance letter shall be sent by the proponent to the concerned Panchayat, Town Panchayat / Panchayat union/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the proponent and also kept at the site, for the general public to see.

5. Quarry lease area should be demarcated on the ground with wire fencing to show the boundary of the lease area on all sides with red flags on every pillar shall be erected before commencement of quarrying.

6. The proponent shall ensure that First Aid Box is available at site.

7. The excavation activity shall not alter the natural drainage pattern of the area.

8. The excavated pit shall be restored by the project proponent for useful purposes. In this regard, the proponent shall deposit a sum of Rs. 5,00,000/- (Rupees Five Lakhs only) in the name of District Collector, Krishnagiri in the form of fixed deposit. The said fixed deposit will be refunded after restoration of pit after end of the lease period.

9. The proponent shall quarry and remove only in the permitted areas as per the approved Mining Plan details.

10. The quarrying operation shall be restricted between 7AM and 5 PM.

11. The proponent shall take necessary measures to ensure that there shall not be any adverse impacts due to quarrying operation on the nearby human habitations, by way of pollution to the environment.

12. A minimum distance of 15.mts. From any civil structure shall be kept from the periphery of any excavation area.

13. Depth of quarrying shall be 2m above the ground water table /app depth of mining whichever is lesser to be considered as a safe guard against Environmental Contamination and over exploitation of resources.

14. The mined out pits should be backfilled where warranted and area should be suitably landscaped to prevent environmental degradation. The mine closure plan as furnished in the proposal shall be strictly followed with back filling and tree plantation.

15. Wet drilling method is to be adopted to control dust emissions. Delay detonators and shock tube initiation system for blasting shall be used so as to reduce vibration and dust.

16. Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities.

17. The explosives shall be stored at site as per the conditions stipulated in the permits issued by the licensing Authority.

18. Blasting shall be carried out after announcing to the public adequate through public address system to avoid any accident.

19. A study has to be conducted to assess the optimum blast parameters and blast design to keep the vibration limits less than prescribed levels and only such design and parameters should be implemented while blasting is done. Periodical monitoring of the vibration at specified location to be conducted and records kept for inspection.

20. The Proponent shall take appropriate measures to ensure that the GLC shall comply with the revised NAAQ norms notified by MoEF, Gol on 16.11.2009.(GLC = Ground Level Concentration), (NAAQ= Noise and Ambient Air Quality).

21. The following measures are to be implemented to reduce Air Pollution during transportation of mineral

- i. Roads shall be graded to mitigate the dust emission.
- ii. Water shall be sprinkled at regular interval on the main road and other service roads to suppress dust.

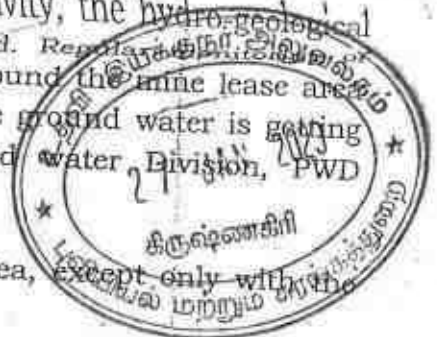
22. The following measures are to be implemented to reduce Noise Pollution

- i. Proper and regular maintenance of vehicles and other equipment.
- ii. Limiting time exposure of workers to excessive noise.



- iii. The workers employed shall be provided with protection equipment and earmuffs etc.
 - iv. Speed of trucks entering or leaving the mine is to be limited to moderate speed of 25 kmph to prevent undue noise from empty trucks.
23. Measures should be taken to comply with the provisions laid under Noise Pollution (Regulation and Control) (Amendment) Rules, 2010, dt:11.01.2010 issued by the MoE&F, GoI to control noise to the prescribed levels.
 24. Suitable conservation measures to augment groundwater resources in the area shall be planned and implemented in consultation with Assistant Director, Ground Water Division, PWD, Dharmapuri.
 25. Rain water harvesting to collect and utilize the entire water falling in land area should be provided by construction of a storage tank with a capacity of 5,00,000 litres and the rain water harvested in the entire quarry area should be stored in it and used for the quarry purpose like dust prevention, wet drilling, providing water for green belt etc.
 26. Permission from the competent authority should be obtained for drawl of ground water, if any, required for this project.
 27. Topsoil, if any, shall be stacked properly with proper slope with adequate measures and should be used for plantation purpose:
 28. The following measures are to be adopted to control erosion of dumps:-
 - i. Retention/ toe walls shall be provided at the foot of the dumps.
 - ii. Worked out slopes are to be stabilized by planting appropriate shrub / grass species on the slopes.
 29. Waste oils, used oils generated from the EM machines, mining operations, if any, shall be disposed as per the Hazardous Wastes (Management, Handling, and trans boundary movement) Rules, 2008 and its amendments thereof to the recyclers authorized by TNPCB.
 30. Concealing the factual data or failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
 31. Rain water getting accumulated in the quarry floor shall not be discharged directly to the nearby stream or water body. If it is to be let into the nearby water body, it has to be discharged into a silt trap on the surface within the lease area and only the overflow after allowing settling of soil be let into the nearby waterways. The silt trap should be of sufficient dimensions to catch all the silt water being pumped out during one season. The silt trap should be cleaned of all the deposited silt at the end of the season and kept ready for taking care of the silt in the next season. Photographs of the silt trap should be furnished before commencing quarry operation.

32. The lease holder shall undertake adequate safeguard measures during extraction of material and ensure that due to this activity, the hydro-geological regime of the surrounding area shall not be affected. Remedial measures shall be carried out around the mine lease area during the mining operation. If at any stage, that the ground water is getting depleted carried out. The Assistant Director Ground Water Division, PWD Dharmपुरi shall monitor.



33. No tree-felling shall be done in the leased area, except only with the permission from competent Authority.

34. To take up environmental monitoring of the proposed quarry site before, during and after the mining activities including vibration study data, water, air & flora/fauna environment, slurry water generated/disposed and method of disposal, involving a reputed academic Institution and it should be monitor by the District Environmental Engineer, TNPCB, Hosur on yearly basis.

35. It shall be ensured that the total extent of nearby quarries (existing, abandoned and proposed) located within 500 meter radius from the periphery of this quarry is not exceeding 25.00.0 hectares within the mining lease period of this application.

36. It shall be ensured that there is no habitation is located within 500 meter radius from the periphery of the quarry site and also ensure that no hindrance will be caused to the people of the habitation located within 500m radius from the periphery of the quarry site

37. Ground water quality monitoring should be conducted once in 3 Months.

38. Transportation of the quarried materials shall not cause any hindrance to the Village people/Existing Village road.

39. Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI once in three months.

40. Air sampling at intersection point should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI periodically once in six months.

41. Bunds to be provided at the boundary of the project site and it should be properly maintained.

42. The project proponent shall undertake plantation / afforestation work by planting the native species on all side of the lease area at the rate of 400/Ha. Suitable tall tree saplings should be planted on the bunds and other suitable areas in and around the work place.

43. At least 10 Neem trees should be planted around the boundary of the quarry site.

44. Floor of excavated pit to be levelled and sides to be sloped with gentle slope (Except for granite quarries) in the mine closure phase.
45. The Project Proponent shall ensure a minimum of 2.5% of the annual turnover will be utilized for the CSR Activity
46. The Project Proponent shall provide solar lighting system to the nearby villages
47. The Project Proponent shall comply with the mining and other relevant rules and regulations where ever applicable.
48. Rainwater shall be pumped out Via Settling Tank only.
49. Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary shall be developed and maintained.
50. As per MoEF & CC, GoI, Office Memorandum dated 30.03.2015, prior clearance from Forestry & Wild Life angle including clearance from obtaining committee of the National Board for Wild life as applicable shall be obtained before starting the quarrying operation, if the project site is located within 10KM from National Park and Sanctuaries.
51. The quarrying activity shall be stopped if the entire quantity indicated in the Mining plan is quarried even before the expiry of the quarry lease period and the same shall be monitored by the District Authorities.
52. Safety equipments to be provided to all the employees.
53. Safety distance of 50 m has to be provided in case of railway, reservoir, canal / odai.
54. The Assistant / Deputy Director, Department of Geology & Mining shall ensure that the proponent has engaged the blaster with valid Blasting license / certificate obtained from the competent authority before execution of mining lease.
55. The proponent shall furnish the Baseline data covering the Air, Water, Noise and land environment quality for the proposed quarry site before execution of mining lease.
56. The proponent shall erect the pillars in accordance with the Rules for depicting GPS details in the earmarked quality for the proposed quarry site before execution of mining lease.
57. The proponent shall furnish the data obtained from the Public Works Department regarding the details of ground water table in the quarry site.
58. The proponent has to display the name board at the quarry site showing the details of Proponent, lease period, extent etc., with respect to the existing activity before execution of mining lease.

59. The proponent has to display the name board at the quarry site showing the details of proponent, leased period, extent etc. with respect to the existing activity before execution of mining.

60. Heavy earth machinery equipments if utilized, after getting approval from the competent authority.

61. The environmental norms shall be monitored by the District Environmental Engineer, Tamil Nadu Pollution Control Board, Hosur.

62. The Assistant Director Public Works Department, Ground water Division Dharmapuri shall monitor whether the quarrying activity is carried out above the ground water level on yearly basis.

63. NOC for sanitary certificate shall be obtained from the Deputy Director of Health Services, Krishnagiri.

64. Yearly medical examination of the quarry workers should be carried out by a registered medical practitioner and the report should be filed in the quarry office in a separate file and copy should be sent to the Deputy Director, Health Services, Krishnagiri.

65. Closed circuit camera should be erected at the quarry site and the passage of vehicles in and out of the quarry should be recorded and the footage of the recording of the camera should be maintained and should be produced before the enforcing officials when ever called for.

66. Vehicles used for transportation of quarried materials should be fitted with GPS and monitored.

67. Pit mouth register should be maintained in on line.

68. Auditor report on the annual turn over amount should be submitted to the District Collector within one month from the end of the financial year.

69. 02.5% of the turn over amount should be utilized for the CSR activity after consultation with the District Collector.

B. General Conditions:

1. EC is given only on the factual records, documents and the commitment furnished in non judicial stamp paper by the proponent.
2. The Proponent shall obtain the Consent for Establishment from the TNPC Board before commencing the activity.
3. No change in mining technology and scope of working should be made without prior approval of the DEIAA, Krishnagiri.
4. No change in the calendar plan including excavation, quantum of mineral (minor mineral) should be made.
5. Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters

- conform to the norms prescribed by the Central Pollution Control Board in this regard.
6. Effective safeguards shall be adopted against health risks on account of breeding of vectors in the water bodies created due to excavation of earth.
 7. A berm shall be left from the boundary of adjoining field having a width equal to at least half the depth of proposed excavation.
 8. Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
 9. Vehicular emissions shall be kept under control and be regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying them mineral shall not be overloaded.
 10. Access and haul roads to the quarrying area should be restored in a mutually agreeable manner where these are considered unnecessary after extraction has been completed.
 11. All Personnel shall be provided with protective respiratory devices including safety shoes, Masks, gloves etc. Supervisory people should be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
 12. Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly. The workers shall be provided with personnel protective measures such as masks, gloves, boots etc.
 13. Workers/labourers shall be provided with facilities for drinking water and sanitation facility for Female and Male separately.
 14. The project proponent shall ensure that child labour is not employed in the project as per the sworn affidavit furnished.
 15. The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its regional office located at Chennai.
 16. The Environmental Clearance does not oblige the applicant/proponent of his obligation/requirement to obtain other statutory and administrative clearances from other statutory and administrative authorities.
 17. This Environmental Clearance does not imply that the other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would be considering the project on merits and be taking decisions independently of the Environmental Clearance
 18. The DEIAA, Krishnagiri may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.
 19. The DEIAA, Krishnagiri may cancel the environmental clearance granted to this project under the provisions of EIA Notification, 2006, at any stage of the validity of this environmental clearance, if it is found or if it comes to the knowledge of this DEIAA.KGI that the project proponent has deliberately concealed and/or submitted false or misleading

- information or inadequate data for obtaining the environmental clearance.
20. Failure to comply with any of the conditions mentioned above shall result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.
 21. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability Insurance Act, 1991 along with their amendments, draft Minor Mineral Conservation & Development Rules, 2010 framed under MMDR Act 1957, National Commission for protection of Child Right Rules, 2006 and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/Hon'ble High Court of Madras and any other Courts of Law relating to the subject matter.
 22. Any other conditions stipulated by other Statutory/ Government authorities shall be complied.

V. The lessee should strictly adhere all the conditions imposed in the environmental clearance issued by The DEIAA Krishnagiri and consent order of the Tamil Nadu Pollution Control Board.

VI. The lessee should periodically renew the environmental clearance and the consent orders of the Tamil Nadu Pollution Control Board without any lapse.

VII. If any illicit quarrying is found in the area over an extent of 4.00.0 hectares in S.F.Nos. 78/1A (part) and 78/1B (part) of Kothapetta Village, Krishnagiri Taluk and District before the date of execution of lease deed, this lease deed is liable to be cancelled and criminal action will be initiated.

VII. If the quarry area is situated within 10 km distance from any protected areas NOC from the Standing committee of NBWL should be obtained before commencing the quarry operation.

IX. If the lease holder wants to quarry more than the quantity permitted in the environmental clearance within the lease period, modified mining plan / scheme and Environment Clearance for the additional quantity should be submitted.

Sd/ C. Karhiravan,
DISTRICT COLLECTOR,
KRISHNAGIRI.

/ True copy/

30/5/18

For Collector,
Krishnagiri

To
M/s. Devaraajaaa.M. Sand
No. 58B Gandhi Nagar,
Krishnagiri Town and Taluk

Copy to the Revenue Divisional Officer, Krishnagiri

Copy to the Tahsildar, Krishnagiri.

Copy to the Village Administrative Officer, Kothapetta Village

S. DHANASEKAR, M.Sc. (Geo)
Qualified Person

1744



தமிழ்நாடு தமில்நாடு TAMILNADU

4563 Sni. Davarajaa
27/4/18 'M' Sand
Krishnagiri

279080
B. R. SATHISH KUMAR
S. V. Lc: 6579/88
Krishnagiri, Tamilnadu.

APPENDIX V

(See Rules 19 and 33)

FORM OF JOINT AGREEMENT FOR QUARRYING AND CARRYING AWAY MINOR MINERALS BY LESSEES IN RYOTWARI LANDS IN WHICH THE MINERALS BELONGS TO GOVERNMENT.

Krishnagiri District Collector's Proceedings Roc. No. 418/2017 /Mines/ Dated 30.05.2018

THIS AGREEMENT MADE THIS 27 day of May 2018 between 1) Tmt. K.M. Vijaya, W/o D. Mathiahagan, 58-B Gandhi Nagar, Krishnagiri Town and Taluk 2) A.M. Shiyani D/o D. Mathiahagan D. No. 58-B Gandhi Nagar, Krishnagiri Town and Taluk (herein after referred to as "the registered holder" which expression shall where the context so admits include her heirs, executors, administrators, legal representatives and assigns) of the first part and M/s Davarajaa M. Sand, No. 58 B Gandhi Nagar, Krishnagiri Town and Taluk Represented by its Managing Partner Thiru D. Mahiahagan (hereinafter referred to as "the lessee" which

[Signature]
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REGISTERED HOLDERS

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expression shall where the context so admits shall include his heirs, executors, administrators, legal representatives and assigns of the second part and the Governor of Tamil Nadu (hereinafter referred to as the Government which expression shall where the context so admits shall include his successors in office and assigns) of the third part.

WHEREAS, the registered holder holds the lands described in the schedule hereto and intended to lease out to the lessee of the said lands for the purpose of quarrying Rough stone and Jelly in the said lands and to deposit mining waste in the said lands and has lodged with Collector the lease and accurate map or sketch of the said lands.

AND, WHEREAS, the lessee or tenant of the registered holder has made application to the Collector of the district of Krishnagiri (hereinafter referred to as "the Collector") seeking grant of quarrying lease for quarrying Rough stone and jelly in the said lands and to deposit mining waste in the said lands and has lodged with the Collector an accurate map or sketch of the said lands.

AND, WHEREAS, the Collector, have granted a quarrying lease to the lessee and allowed him to commence quarrying operations for Rough Stone and Jelly in the said lands and to deposit mining waste in the said lands and has lodged with the Collector an accurate map or sketch of the said lands.

AND WHEREAS, the Collector is prepared to allow the said registered holder or lessee to commence mining operations and to deposit mining waste in or on the said lands described in the schedule for a term of five years beginning on 31 day of May 2018 and ending on 30 day of May 2023 upon the registered holder and the lessee entering into the agreement here in contained.

AND WHEREAS, the registered holder has deposited with the collector, the sum of Rs. 10,000/- vide Chalan No. Nil, dated 27.4.2018 remitted at State Bank of India, Krishnagiri as security for the due performance of the covenants, agreements and provisos or damage which may be incurred by the Government by reason of any of the said lands described in the schedule hereto being rendered unfit for cultivation by the mining operations therein or by the deposit of mining waste thereon by either the registered holders or the lessee.

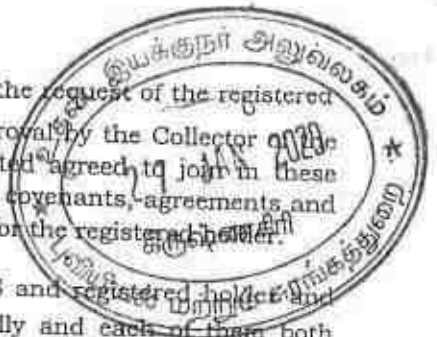
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DISTRICT COLLECTOR

AND WHEREAS, the lessee has at the request of the registered holder and in consideration of such approval by the Collector of mining operations as herein before recited agreed to join in these presents for the purpose of entering into covenants, agreements and provisos hereinafter contained as surety for the registered holder.



NOW THESE PRESENTS WITNESS and registered holder and the lessee do hereby jointly and severally and each of them both individually hereby covenant and agree with the Government as follows:-

1. To carry on mining operations during the said term in a proper and workman like manner and to deposit mining waste on the lands described in the schedule here to and to answer and to account at all reasonable times to Government for all acts and defaults committed by any servants, agents or workmen employed by the registered holders or lessee in carrying on such operations or in making such deposits.

2. To pay on the 31 day of May 2018 next and on the 31 day of May of every succeeding year so long as the operations aforesaid are carried on, into the Treasury/ State Bank of India at Krishnagiri to the credit of the Government in addition to the land assessment for the time being payable in respect of the said lands, seigniorage on minerals mined at the rates prescribed by the Government from time to time.

3. To abide by the rules prescribed by the Government from time to time regarding quarrying of minor minerals.

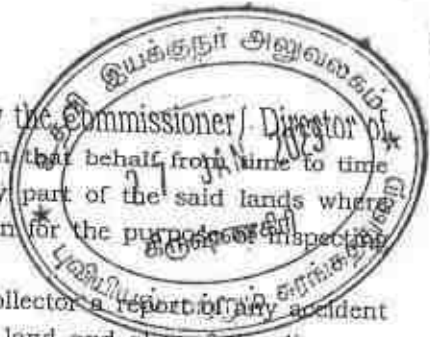
4. To keep correct accounts in such form as the collector shall from time to time required and direct showing the quantities and other particulars of all minerals obtained by the registered holder or the lessee from the said lands and also the number of persons employed in carrying on the said mining operations therein and to prepare and maintain from time to time when so directed by the said collector complete and correct plans of all mines and working in the said lands and to allow any officer thereunto authorised by the Commissioner/Director of Geology and Mining, Tamil Nadu, from time to time and at all times to examine such accounts and any such plans and to supply and furnish when so required all such information and returns regarding all or any of the matters aforesaid as the Government may from time to time required and direct.

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REGISTERED HOLDERS
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District Collector



DISTRICT COLLECTOR



5. To allow any officer authorized by the Commissioner / Director of Geology and Mining, Tamil Nadu in their behalf from time to time and at all times to enter upon any part of the said lands where mining operations may be carried on for the purpose of inspecting the same.

6. To forthwith send to the Collector a report of any accident which may occur at or in the said land and also of the discovery therein of any minerals other than Rough Stone.

7. Not to claim any remission of assessment in respect of any of the said lands which shall be rendered unfit for surface cultivation by carrying on of any mining operations or by the deposit of mining waste unless thirty times of the assessment thereon has been deducted under proviso 2 here under.

PROVIDED ALWAYS and it is hereby further agreed by and between the parties as follows:-

1. That it shall be lawful for the registered holders or lessee as the case may be at any time to cease mining operations under these presents provided the registered holders or lessee shall pay the Government or the Collector the land assessment, cess and seigniorage payable by the registered holders or the lessee under these presents upto to the end of the year in which the registered holder or the lessee shall cease such mining operations and shall restore the said lands fence or fill in abandoned pits and excavations therein if required by the collector as next hereinafter provided and upon, the registered holders or the lessee so doing these presents shall cease and determine.

2. That in case the registered holder shall relinquish the whole or part of the said lands in case of the expiry or sooner determination of this agreement then and in any such case, the registered holders in the case of relinquishment and the registered holders and the lessee in other cases shall restore said lands or the area relinquished or so much thereof as the collector shall required to be restored to a state fit for cultivation and shall securely and permanently fence or fill in all abandoned pits and excavation therein as the Collector shall

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require to be so fenced or filled in and in case the registered holder or the lessee shall fail, or neglect any such lands with the registered holders or the lessee be required to restore to a state fit for cultivation or to so fence or fill in any such abandoned pit or excavation which the registered holders or the lessee shall be required to so fence or fill them and in any such case it shall be lawful for the collector to so restore any such lands or as the case may be so fence or fill in any pit or excavation at the expense of the registered holder or lessee and to apply the said sum of Rs 5,000/- (Rupees five thousand only) so deposited in or towards the cost of so doing and to deduct from the amount of the said deposit and retain on behalf of the Government a sum equal to thirty times the assessment of the said lands which shall have been rendered unfit for cultivation. If, however the amount of deposit is not sufficient to cover the cost of such restoration or fencing or filling as the case may be or to meet thirty times the assessment of the area rendered uncultivable, it shall be lawful for the Government to recover the balance by resort to Civil Court.

3. That all land assessment, cess and seigniorage fee or dead rent payable under these presents shall be recoverable under the provisions of the Tamil Nadu Revenue Recovery Act, 1864, or any subsisting statutory modification thereof, as if the same were arrear of land revenue.

4. That in the event of any breach of the registered holders/ lessee of any of the conditions of these presents, it shall be lawful for the Government to levy enhanced seigniorage subject to the maximum of five times the normal rate or for the Collector to give notice in writing to the registered holders/lessee of his intention to cancel these presents whereupon the same shall stand cancelled but without prejudice to any rights which the Government may have against the registered holder/ lessee in respect of any antecedent claim or breach of covenant or condition.

5. That any notice to be given to registered holder / lessee may be addressed to his last known place of abode and where a notice has been so addressed it shall be deemed to have been duly served for the purpose of these presents.

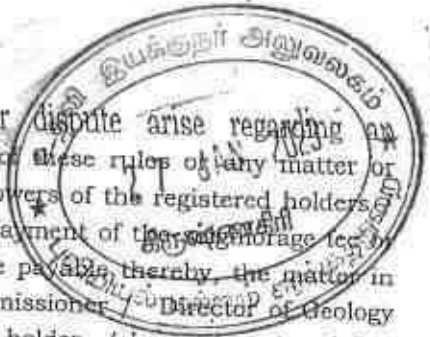
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6. Should any question or dispute arise regarding an agreement executed in pursuance of these rules or any matter or thing connected therewith or the powers of the registered holder or lessee thereunder, the amount or payment of the seigniorage fee, by dead rent or area assessment made payable, thereby, the matter in issue shall be decided by the Commissioner / Director of Geology and Mining. In case the registered holder / lessee is not satisfied with decision of the Commissioner/Director of Geology and Mining, the matter shall be referred to the State Government.

7. The registered holder shall abide by the conditions laid down in the payment of Wages Act, 1936 (central Act IV of 1936), the Mines Act, 1952 (Central XXX V of 1952) and the Indian Explosive Act, 1884 (Central Act IV of 1994).

8. For the purpose of calculation of stamp duty as per article No. 35 (a) (IV) of the Stamp Act, 1% of total anticipated seigniorage fee amount of Rs. 6,05,33,705/- area assessment for five years Rs. 3,000/- and security deposit amount of Rs.10,000/- were taken into account.

18 SEPCIAL CONDITIONS AND CONDITIONS :

- a) A safety zone of 7.5 mts should be left out for the adjacent patta lands.
- b) A safety zone of 10 mts should be left out for the Government land S.F No. 56/1 situated on the south west of the applied area.
- c) At any cost no quarrying should be carried out in the adjacent Government land and no hinderance should be given to the public.
- d) Mining plan shall be prepared by in incorporating all the details as proposed in the Minor Mineral Conservation and Development Rules 2010.
- e) Mining Plan shall be prepared by the in incorporating all the details as proposed in the letter No. SEIAA-TN/Minor Minerals/2012 dated 17.04.2013 of the State Level Environment Impact Assessment Authority, Tamil Nadu.
- f) Quarrying activity should be carried out only from 7.00 A.M to 5.00 P.M.

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- g) The lessee should get the consent for operation from the Tamil Nadu Pollution Control Board before the commencement of quarrying operation.
- h) The grantee should sent the notice for opening of quarry to the Director General of Mines safety, Bangalore.
- i) Quarrying operation should be carried out only after appointing Mines Manager/Mines Mate and Foremen.
- j) At any cost the blasting activity should be carried out under the Supervision of Mines Mate.
- k) If any accident occur in the quarry area the lessees should give immediate intimation to the Director of Mines safety Bangalore and District Collector, Krishnagiri and lessee is solely held responsible for any violation.

II. நிபந்தனைகள்

1. குத்தகை காலம், குத்தகை ஒப்பந்தப்பத்திரம் நிறைவேற்றும் நாளிலிருந்து ஐந்து ஆண்டுகளாகும்.
2. குவாரி குத்தகை வழங்கப்பட்ட இடத்தில் குவாரி செய்யும் வேலிக்கல் / குண்டுக்கல் / கட்டுக்கல் / சக்கை மற்றும் ஜல்லி ஆகியவற்றை மேற்படி இடத்திலிருந்து வெளியில் எடுத்துச் செல்வதற்கு முன்பு அவை ஒவ்வொன்றிற்கும் அவற்றிற்குரிய வீதத்தில் சீரியசேஜ் தீர்வை செலுத்தி இவ்வழங்கலகத்தில் பரமி மற்றும் நடைச்சீட்டு வெறு பின்புதான் மேற்படி கனிமங்களை குவாரியிலிருந்து வெளியில் எடுத்துச் செல்ல வேண்டும். 1959 ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், இணைப்பு II-ல் அம்சப்போது அரசால் நிர்ணயிக்கப்படும் வீதத்தில் பரமி தீர்வை செலுத்த வேண்டும். மேற்கண்ட தொகையைத் தவிர அரசால் அங்கப்பின்பு நிர்ணயிக்கப்படும் இது தொகைகளையும் குத்தகைதாரர் செலுத்த வேண்டும்.
3. குத்தகை இடத்திற்கு அருகிலுள்ள குடியிருப்புகள், கட்டடங்கள், நீர்நிலைகள், குளங்களின் கரைகள், மரங்கள், சாலைகள், வண்டிப்பாதைகள், நடைபாதைகள் மற்றும் இது பொதுச் சொத்துக்களுக்கு பாதுகாப்பில்லாமல் குவாரி செய்ய வேண்டும்.
4. குத்தகை வழங்கப்பட்ட இடத்திற்கு அருகாமையில் உள்ள பட்டாதாரர்கள் மற்றும் பொதுமக்களுக்கு பாதுகாப்பில்லாமல் குவாரி செய்ய வேண்டும்.
5. குத்தகை வழங்கப்பட்ட இடத்திற்கு அருகிலுள்ள ஏயில்பாதைகள், சாலைகள், மின்சாரம் மற்றும் தொலைபேசி கம்பிகளுக்கு 50 மீட்டரும், குடியிருப்பு பகுதியிலிருந்து 300 மீட்டரும், நடைபாதைகள், கிராம சாலைகளுக்கு 10 மீட்டரும் பாதுகாப்பு இடைவெளி விட்டு குவாரி செய்ய வேண்டும்.
6. மாவட்ட அட்சித்தலைவர் (அல்லது) அரசால் அதிகாரம் வழங்கப்பட்ட அலுவலரை குத்தகை வழங்கப்பட்ட இடத்தைப் பார்வையிடவும், குவாரி பதிலீடுகள், ஆய்வுகள் மற்றும் கணக்கை சரிபார்க்கவும் அனுமதிக்க வேண்டும். இது சம்பந்தமாக அவர்கள் சேரும் அனைத்து விவரங்களையும் வழங்க வேண்டும்.
7. சுற்றுப்புற சூழ்நிலை பாதுகாப்பு, கனிம பாதுகாப்பு, தொழிலாளர் பாதுகாப்பு முதலியவற்றைக் கருத்தில் கொண்டு விடுதான அடிப்படையில் திறமையான முறையாகக் குவாரி செய்ய வேண்டும்.
8. மாவட்ட அட்சித்தலைவர் மற்றும் ஆணையர், புலியியல் மற்றும் கரகந்தறை, ஆகியோரால் அதிகாரம் வழங்கப்பட்ட அலுவலரை மேலே பத்தி (9)-ல் குறிப்பிட்டுள்ள நிபந்தனைகள் தொடர்பாகவும், மேற்கண்ட அலுவலர்களின் ஆணையை நிறைவேற்றவும் குத்தகை வழங்கப்பட்ட இடத்தைப் பார்வையிட அனுமதிக்க வேண்டும்.
9. குத்தகைதாரரின் செலவில் குத்தகை ஒப்பந்தப்பத்திரம் நிறைவேற்றி அதனை பதில் செய்வதற்கு முன்பு குத்தகை இடத்தில் குவாரி மற்றும் இது சம்பந்தப்பட்ட வேலைகளைத் தொடங்கக்கூடாது.
10. குத்தகை வழங்கப்பட்டுள்ள இடத்திற்குள் எல்லையிலிருந்து 7.5 மீட்டர் தூரத்திற்குள் குவாரி செய்க்கூடாது.


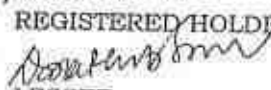
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11. பொது சாலைகளிலிருந்து குத்தகை வசூலகப்பட்ட இடத்திற்குச் செல்ல பராமரிப்பு குத்தகைதாரர் சொந்த பொறுப்பில் செய்து கொள்ள வேண்டும்.
12. குத்தகை ஒப்பந்தப்பத்திரத்துடன் இணைந்துள்ள வரைபடத்தில் காட்டப்பட்டுள்ள குத்தகை இடத்தைச் சுற்றிலும் எல்லைக்கற்கள் நட்கு அபிவிருத்திச் சரிபாணியை பராமரிக்க வேண்டும்.
13. 1959 ஆம் வருடத்திய தமிழ்நாடு சிறுகளியம் சலுகை விதிகள் இணைப்பு XII மற்றும் XII-ல் உள்ள படிவங்களில் முறையே இசைவாணைச்சீட்டு மற்றும் நடைச்சீட்டிணைந்த தயார் செய்து அவற்றில் மாவட்ட ஆட்சித்தலையலால் அதிகாரம் வழங்கப்பட்ட அலுவலர் கையெழுப்ப முத்திரை மற்றும் அலுவலக முத்திரைகள் பெற்று குவாரியிலிருந்து குண்டுக்கல், கட்டுக்கல், சக்கை மற்றும் ஜல்லி ஆகியவற்றை வெளியில் எடுத்துச் செல்லும் ஒவ்வொரு வாகனத்திற்கும் ஒவ்வொரு நடைக்கும் வழங்கப்படவேண்டும். குண்டுக்கல், கட்டுக்கல், சக்கைகள், ஜல்லி ஆகியவற்றை ஏற்றிச் செல்லும் ஒவ்வொரு வாகனமும் ஆணைச் சேதனைச் செய்வதற்கு அதிகாரம் பெற்ற அலுவலர் சேதனைச் செய்யும்போது நடைச்சீட்டிணைந்த காண்பிக்க வேண்டும். இசைவாணைச்சீட்டு மற்றும் நடைச்சீட்டிணைந்த நகல்களை குவாரியில் வைத்திருக்க வேண்டும். முறையான இசைவாணைச்சீட்டு மற்றும் நடைச்சீட்டுகள் இல்லாமல் களியங்களை ஏற்றிச் செல்லும் வாகனங்கள் 1959-ம் வருடத்திய தமிழ்நாடு சிறுகளியம் சலுகை விதிகள் மற்றும் கரணகங்கள் மற்றும் களியங்கள் (ஒழுங்குமுறை மற்றும் அபிவிருத்தி) சட்டம், 1957-ன்படி கைப்பற்றப்பட்டு, குத்தகைதாரர் மீது நடவடிக்கை எடுக்கப்படுவதுடன் குவாரிக் குத்தகைகளையும் ஏற்று செய்ப நடவடிக்கை எடுக்கப்படும்.
14. குத்தகை வழங்கப்பட்ட இடத்தை குண்டுக்கல், கட்டுக்கல், சக்கை மற்றும் ஜல்லி குவாரி செய்ய மட்டும் பயன்படுத்த வேண்டும். குத்தகை உரிய ஆணை அல்லது குத்தகை ஒப்பந்தப்பத்திரத்தில் தலையலாக களிய விவரம் குறிக்கப்பட்டு இருந்தால் அதனை எந்த நேரத்திலும் திருத்தவதற்கு மாவட்ட ஆட்சியருக்கு அதிகாரம் உண்டு. குத்தகைதாரர் அதனடிப்படையில் எந்த உரிமையும் கேரமுடியாது.
15. பெருகேற்றுவதற்கும், அபிவிருத்தி ஏற்றுமதி செய்வதற்கும் பயன்படும் பெரிய கத்துண்டங்கள் வழங்கத்தில் கற்குவாரி செய்யக் கூடாது.
16. குத்தகை ஒப்பந்தப்பத்திரத்தில் குறிக்கப்படாத வேறு ஏதாவதொரு களியம் கிடைத்தால், அதனை சம்பந்தப்பட்ட அலுவலர் அலுவலியைப் பெறாமலும், அதற்குரிய சீனியரேஜ் தொலகையைச் செலுத்தாமலும் எடுக்கக்கூடாது. புதிய களியம் கிடைத்த விவரத்தை 30 தினங்களுக்குள் தெரிவிக்காமல் எடுத்துச் சென்றால் இக்குற்றத்திற்கு அந்த களியத்திற்குரிய சாதாரண சீனியரேஜ் கட்டணத்தைப்போல் 15 மடங்குவரை மாவட்ட ஆட்சித்தலையலால் அபராதம் விதித்து வசூலிக்கப்படும்.
17. குத்தகை காலம் முடிந்தபிறகு, குத்தகை வழங்கப்பட்ட இடத்திலிருந்து குண்டுக்கல், கட்டுக்கல், சக்கை மற்றும் ஜல்லியை குவாரி செய்து வெளியில் எடுத்துச் செல்ல குத்தகைதாரருக்கு உரிமையில்லை.
18. குத்தகை காலம் முடிவடைந்த பிறகு குத்தகை இடத்தில் எஞ்சின, வெஷின் போன்ற எந்தவிதமான தளவாட பொருட்களையும் வைத்திருக்கக்கூடாது. அவற்றை குத்தகை காலத்தில் கடைசி நாளன்று குத்தகைதாரர் எடுத்துச் சென்றுவிட வேண்டும்.
19. குத்தகையை வேறு எவருக்கும் உள் குத்தகைக்கு விடக்கூடாது.
20. குவாரி செய்வதில் இழப்பு ஏற்படின் நட்டசுடு கேட்கக்கூடாது.
21. குவாரியில் வேலை செய்யும் தொழிலாளர்கள் மற்றும் இதர நபர்களுக்கு விபத்து ஏதாவது ஏற்படின் அதற்கு முழுப் பொறுப்பினையும் குத்தகைதாரரார்ச்சேரும். இதற்கு அரசு பொறுப்பில்லை.
22. அரசுக்கு செலுத்த வேண்டிய தொகையை உரிய காலத்திற்குள் செலுத்தவில்லை என்றால் அத்தொகை 24% அல்லது அரசால் அடிவப்போது நிர்ணயிக்கப்படும் வீதத்தில் வட்டியுடன் குத்தகைதாரரிடமிருந்து வசூலிக்கப்படும்.
23. அரசுக்கு செலுத்த வேண்டிய பாக்கித் தொகை தமிழ்நாடு வருவாய் வசூல் சட்டம் 1864-ன் கீழ் வசூலிக்கப்படும்.
24. குத்தகை நிபந்தனைகள், 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகளியம் சலுகை விதிகள், அரசு, ஆணையர், புவியியல் மற்றும் கரணகத்துறை, மாவட்ட ஆட்சித்தலையலால் ஆகியவற்று ஆணைகள் கீழ்ப்படிவ் மீறலுக்கு அபராதம் விதிப்பதோடு அல்லாமல் குத்தகைதாரருக்கு நேர்ப்புக விளாணைக்கு உட்ப்பவித்த பின்பு, குத்தகை உரிமை ரத்து செய்ப நடவடிக்கை எடுக்கப்படும்.


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25. அரசின் அலுவலகத்தைய ஆணைகளுக்கேற்ப நிபந்தனைகளை அமைக்கவே, நீக்கவே, கூடுதலாக நேர்க்கவே, மாவட்ட அலுவலகங்களில் முடி அறிவிப்பும் உண்டு.
26. மேற்கூறிய நிபந்தனைகளுடன் 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சமூக விதிகள், சரங்கங்கள் மற்றும் கனியங்கள் (ஒழுங்குமுறை மற்றும் அபிவிருத்தி) சட்டம் 1957, மாவட்ட ஆட்சித்தலைவர் ஆகியோரால் அலுவலகப்போது நிறுவப்படும் ஆணைகள் குத்தகைதாரரைக் கட்டுப்படுத்தும்.
27. குவாரிகள்/சரங்கங்களுக்கு பொருத்தக்கூடிய தொழிலாளர் கூட்டங்களுக்கு கட்டுப்பாட்டு குத்தகைதாரர் குவாரி செய்யவேண்டும். தவறினால் சம்பந்தப்பட்ட அரசின் சட்டப்பூர்வமான நடவடிக்கைகளுக்கு குத்தகைதாரர் உள்ளாக வேண்டி இருக்கும்.
28. இந்திய வெடிமருந்து சட்டம் 1884 (Central Act IV of 1884)-ன்படி உரிய வெடிமருந்து உரிய பெற்று குத்தகைதாரர் பாறைகளை வெடிவைத்து உடைக்க வேண்டும். தவறும் பட்சத்தில் குத்தகைதாரர் கடும தண்டனைக்கு உள்ளாக வேண்டியிருக்கும்.
29. குத்தகைதாரர் குவாரியில் குழந்தை தொழிலாளர்களை பணியமர்த்தக்கூடாது.

III) a) The conditions imposed by the Tamil Nadu Pollution Control Board in the consent to establishment in Air and Water Pollution Act should be strictly adhered and the consent should be renewed periodically.

b) The Environment Clearance issued by the SEIAA, Tamil Nadu should be renewal within the prescribed time limit.

IV) Conditions imposed.

(i) The Environment Clearance is granted to Mining of Rough Stone for the production quantity of 10,25,995 cbm of rough stone for the period of five years from the date of execution of the mining lease period.

(ii) The approved quantity of rough stone to be quarried= 10,25,995 cbm

(iii) Depth of mining permitted = 71 mts.(25 mts. above ground level and 46 mts below ground level) from a period of 5 years.

2.) Conditions to complied before the commencing of mining operation

1. The applicant has to obtain land use classification as industrial use before issue / renewal of mining lease.

2. NOC from the Standing committee of the NBWL shall be obtained, if protected areas are located within 10 km from the proposed project site.

3. The project proponent shall comply the conditions laid down in section V Rule 36 of Tamil Nadu Minor Mineral Concession Rules, 1959.

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4. A copy of the Environment Clearance letter shall be sent by the proponent to the concerned Panchayat, Town Panchayat / Panchayat union/ Municipal Corporation, Urban Local Body and the local body, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the proponent and also kept at the site, for the general public to see.

5. Quarry lease area should be demarcated on the ground with wire fencing to show the boundary of the lease area on all sides with red flags on every pillar shall be erected before commencement of quarrying.

6. The proponent shall ensure that First Aid Box is available at site.

7. The excavation activity shall not alter the natural drainage pattern of the area.

8. The excavated pit shall be restored by the project proponent for useful purposes. In this regard, the proponent shall deposit a sum of Rs. 5,00,000/- (Rupees Five Lakhs only) in the name of District Collector, Krishnagiri in the form of fixed deposit. The said fixed deposit will be refunded after restoration of pit after end of the lease period.

9. The proponent shall quarry and remove only in the permitted areas as per the approved Mining Plan details.

10. The quarrying operation shall be restricted between 7AM and 5 PM.

11. The proponent shall take necessary measures to ensure that there shall not be any adverse impacts due to quarrying operation on the nearby human habitations, by way of pollution to the environment.

12. A minimum distance of 15 mts. From any civil structure shall be kept from the periphery of any excavation area.

13. Depth of quarrying shall be 2m above the ground water table /approved depth of mining whichever is lesser to be considered as a safe guard against Environmental Contamination and over exploitation of resources.

14. The mined out pits should be backfilled where warranted and area should be suitably landscaped to prevent environmental degradation. The mine closure plan as furnished in the proposal shall be strictly followed with back filling and tree plantation.

15. Wet drilling method is to be adopted to control dust emissions. Delay detonators and shock tube initiation system for blasting shall be used so as to reduce vibration and dust.

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16. Drilling and blasting shall be done ~~only either by licensee~~ explosive agent or by the proponent after obtaining ~~required approvals~~ from Competent Authorities.

17. The explosives shall be stored at site as per the conditions stipulated in the permits issued by the licensing Authority.

18. Blasting shall be carried out after announcing to the public adequate through public address system to avoid any accident.

19. A study has to be conducted to assess the optimum blast parameters and blast design to keep the vibration limits less than prescribed levels and only such design and parameters should be implemented while blasting is done. Periodical monitoring of the vibration at specified location to be conducted and records kept for inspection.

20. The Proponent shall take appropriate measures to ensure that the GLC shall comply with the revised NAAQ norms notified by MoEF, Govt on 16.11.2009. (GLC = Ground Level Concentration), (NAAQ= Noise and Ambient Air Quality).

21. The following measures are to be implemented to reduce Air Pollution during transportation of mineral

- i. Roads shall be graded to mitigate the dust emission.
- ii. Water shall be sprinkled at regular interval on the main road and other service roads to suppress dust.

22. The following measures are to be implemented to reduce Noise Pollution

- i. Proper and regular maintenance of vehicles and other equipment.
- ii. Limiting time exposure of workers to excessive noise.
- iii. The workers employed shall be provided with protection equipment and earmuffs etc.
- iv. Speed of trucks entering or leaving the mine is to be limited to moderate speed of 25 kmph to prevent undue noise from empty trucks.

23. Measures should be taken to comply with the provisions laid under Noise Pollution (Regulation and Control) (Amendment) Rules, 2010, dt:11.01.2010 issued by the MoE&F, Govt to control noise to the prescribed levels.

24. Suitable conservation measures to augment groundwater resources in the area shall be planned and implemented in consultation with Regional Director, CGWB. Suitable measures should be taken for rainwater harvesting.

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25. Rain water harvesting to collect and utilize the surface water falling in land area should be provided by construction of a storage tank with a capacity of 5,00,000 litres and the rain water harvested in the entire quarry area should be stored in it and used for the quarry purpose like dust prevention, wet drilling, providing water for green belt etc.

26. Permission from the competent authority should be obtained for drawl of ground water, if any, required for this project.

27. Topsoil, if any, shall be stacked properly with proper slope with adequate measures and should be used for plantation purpose.

28. The following measures are to be adopted to control erosion of dumps:-

- i. Retention/ toe walls shall be provided at the foot of the dumps.
- ii. Worked out slopes are to be stabilized by planting appropriate shrub / grass species on the slopes.

29. Waste oils, used oils generated from the EM machines, mining operations, if any, shall be disposed as per the Hazardous Wastes (Management, Handling, and trans boundary movement) Rules, 2008 and its amendments thereof to the recyclers authorized by TNPCB.

30. Concealing the factual data or failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

31. Rain water getting accumulated in the quarry floor shall not be discharged directly to the nearby stream or water body. If it is to be let into the nearby water body, it has to be discharged into a silt trap on the surface within the lease area and only the overflow after allowing settling of soil be let into the nearby waterways. The silt trap should be of sufficient dimensions to catch all the silt water being pumped out during one season. The silt trap should be cleaned of all the deposited silt at the end of the season and kept ready for taking care of the silt in the next season. Photographs of the silt trap should be furnished before commencing quarry operation.

32. The lease holder shall undertake adequate safeguard measures during extraction of material and ensure that due to this activity, the hydro-geological regime of the surrounding area shall not be affected. Regular monitoring of ground water level and quality shall be carried out around the mine lease area during the mining operation. If at any stage, that the ground water is getting depleted carried out. The Assistant Director Ground water Division, PWD Dharmपुरi shall monitor.

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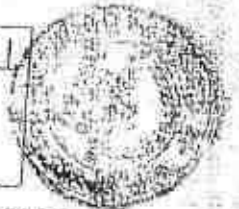


33. No tree-felling shall be done in the leased area, ~~with the permission from competent Authority.~~
34. To take up environmental monitoring of the proposed quarry site before, during and after the mining activities including vibration study data, water, air & flora/fauna environment, slurry water generated/disposed and method of disposal, involving a reputed academic Institution and it should be monitor by the District Environmental Engineer, TNPCB, Hosur on yearly basis.
35. It shall be ensured that the total extent of nearby quarries (existing, abandoned and proposed) located within 500 meter radius from the periphery of this quarry is not exceeding 25.00.0 hectares within the mining lease period of this application.
36. It shall be ensured that there is no habitation is located within 500 meter radius from the periphery of the quarry site and also ensure that no hindrance will be caused to the people of the habitation located within 500m radius from the periphery of the quarry site
37. Ground water quality monitoring should be conducted once in 3 Months.
38. Transportation of the quarried materials shall not cause any hindrance to the Village people/Existing Village road.
39. Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI once in three months.
40. Air sampling at intersection point should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI periodically once in six months.
41. Bunds to be provided at the boundary of the project site and it should be properly maintained.
42. The project proponent shall undertake plantation / afforestation work by planting the native species on all side of the lease area at the rate of 400/Ha. Suitable tall tree saplings should be planted on the bunds and other suitable areas in and around the work place.
43. At least 10 Neem trees should be planted around the boundary of the quarry site.
44. Floor of excavated pit to be levelled and sides to be sloped with gentle slope (Except for granite quarries) in the mine closure phase.
45. The Project Proponent shall ensure a minimum of 2.5 of the annual turnover will be utilized for the CSR Activity.

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46. The Project Proponent shall provide solar lighting system to the nearby villages.
47. The Project Proponent shall comply with the mining and other relevant rules and regulations where ever applicable.
48. Rainwater shall be pumped out Via Settling Tank only
49. Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary shall be developed and maintained.
50. As per MoEF & CC, GoI, Office Memorandum dated 30.03.2015, prior clearance from Forestry & Wild Life angle including clearance from obtaining committee of the National Board for Wild life as applicable shall be obtained before starting the quarrying operation, if the project site is located within 10KM from National Park and Sanctuaries.
51. The quarrying activity shall be stopped if the entire quantity indicated in the Mining plan is quarried even before the expiry of the quarry lease period and the same shall be monitored by the District Authorities.
52. Safety equipments to be provided to all the employees.
53. Safety distance of 50 m has to be provided in case of railway, reservoir, canal / odai.
54. The Assistant / Deputy Director, Department of Geology & Mining shall ensure that the proponent has engaged the blaster with valid Blasting license / certificate obtained from the competent authority before execution of mining lease.
55. The proponent shall furnish the Baseline data covering the Air, Water, Noise and land environment quality for the proposed quarry site before execution of mining lease.
56. The proponent shall erect the pillars in accordance with the Rules for depicting GPS details in the earmarked quality for the proposed quarry site before execution of mining lease.
57. The proponent shall furnish the data obtained from the Public Works Department regarding the details of ground water table in the quarry site.
58. The proponent has to display the name board at the quarry site showing the details of Proponent, lease period, extent etc., with respect to the existing activity before execution of mining lease.
59. The proponent has to display the name board at the quarry site showing the details of proponent, leased period, extent etc. with respect to the existing activity before execution of mining.

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60. Heavy earth machinery equipments if utilized, after getting approval from the competent authority.
61. The environmental norms shall be monitored by the District Environmental Engineer, Tamil Nadu Pollution Control Board, Heaur.
62. The Assistant Director Public Works Department, Ground water Division Dharmapuri shall monitor whether the quarrying activity is carried out above the ground water level on yearly basis.
63. NOC for sanitary certificate shall be obtained from the Deputy Director of Health Services, Krishnagiri.
64. Yearly medical examination of the quarry workers should be carried out by a registered medical practitioner and the report should be filed in the quarry office in a separate file and copy should be sent to the Deputy Director, Health Services, Krishnagiri.
65. Closed circuit camera should be erected at the quarry site and the passage of vehicles in and out of the quarry should be recorded and the footage of the recording of the camera should be maintained and should be produced before the enforcing officials when ever called for.
66. Vehicles used for transportation of quarried materials should be fitted with GPS and monitored.
67. Pit mouth register should be maintained in online.
68. Auditor report on the annual turn over amount should be submitted to the District Collector within one month from the end of the financial year.
69. 02.5% of the turn over amount should be utilized for the CSR activity after consultation with the District Collector.

B. General Conditions:

1. EC is given only on the factual records, documents and the commitment furnished in non judicial stamp paper by the proponent.
2. The Proponent shall obtain the Consent for Establishment from the TNPC Board before commencing the activity.
3. No change in mining technology and scope of working should be made without prior approval of the DEIAA, Krishnagiri.
4. No change in the calendar plan including excavation, quantum of mineral (minor mineral) should be made.
5. Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board.

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6. Effective safeguards shall be adopted against health risks on account of breeding of vectors in the water bodies situated due to excavation of earth.
7. A berm shall be left from the boundary of adjoining field having a width equal to at least half the depth of proposed excavation.
8. Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
9. Vehicular emissions shall be kept under control and be regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying them mineral shall not be overloaded.
10. Access and haul roads to the quarrying area should be restored in a mutually agreeable manner where these are considered unnecessary after extraction has been completed.
11. All Personnel shall be provided with protective respiratory devices including safety shoes, Masks, gloves etc. Supervisory people should be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
12. Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly. The workers shall be provided with personnel protective measures such as masks, gloves, boots etc.
13. Workers/labourers shall be provided with facilities for drinking water and sanitation facility for Female and Male separately.
14. The project proponent shall ensure that child labour is not employed in the project as per the sworn affidavit furnished.
15. The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its regional office located at Chennai.
16. The Environmental Clearance does not obviate the applicant/proponent of his obligation/requirement to obtain other statutory and administrative clearances from other statutory and administrative authorities.
17. This Environmental Clearance does not imply that the other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would be considering the project on merits and be taking decisions independently of the Environmental Clearance.
18. The DEIAA, Krishnagiri may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.

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[Signature]
 DISTRICT COLLECTOR



19. The DEIAA, Krishnagiri may cancel the environmental clearance granted to this project under the provisions of the Environment Notification, 2006, at any stage of the validity of this environmental clearance, if it is found or if it comes to the knowledge of this DEIAA.KGI that the project proponent has deliberately concealed and/or submitted false or misleading information or inadequate data for obtaining the environmental clearance.
20. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.
21. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability Insurance Act, 1991, along with their amendments, draft Minor Mineral Conservation & Development Rules, 2010 framed under MMDR Act 1957, National Commission for protection of Child Right Rules, 2006 and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/Hon'ble High Court of Madras and any other Courts of Law relating to the subject matter.
22. Any other conditions stipulated by other Statutory/ Government authorities shall be complied.

V. The lessee should strictly adhere all the conditions imposed in the environmental clearance issued by The DEIAA Krishnagiri and consent order of the Tamil Nadu Pollution Control Board.

VI. The lessee should periodically renew the environmental clearance and the consent orders of the Tamil Nadu Pollution Control Board without any lapse.

VII. If any illicit quarrying is found in the area over an extent of 4.00.0 hectares in S.F.Nos. 78/1A (part) and 78/1B (part) of Kothapetta Village, Krishnagiri Taluk and District before the date of execution of lease deed, this lease deed is liable to be cancelled and criminal action will be initiated.

VII. If the quarry area is situated within 10 km distance from any protected areas NOC from the Standing committee of NBWL should be obtained before commencing the quarry operation.

IX. If the lease holder wants to quarry more than the quantity permitted in the environmental clearance within the lease period, modified mining plan / scheme and Environment Clearance for the additional quantity should be submitted.

[Signature]
 Shivan AM
 REGISTERED HOLDERS
[Signature]
 LESSEE

Document No. 17/14 of 2018 of Book 1
Contains 28 Sheets 17 Sheet
Registering Officer.
DISTRICT COLLECTOR



THE SCHEDULE

Taluk : KRISHNAGIRI
Village : KOTHAPETTA

Sl No	Survey Field Number	Extent Leased Out in hectares	Boundary			
			North S.F. No.	East S.F. No.	South S.F. No.	West S.F. No.
1	78/1A (part)	1.75.0	79 (patta)	78/1A (part) (patta)	78/2B (part) (patta)	78/2B (Part) (patta)
2	78/1B (part)	2.25.0	79 (patta) 78/1A (part) (patta)	78/1A (Part) & 78/2B (part) (patta)	78/2B (part) 56/1 (Govt. land)	11 (patta)

Shivani AM
REGISTERED HOLDERS
Shivani AM
LESSEE

[Signature]
DISTRICT COLLECTOR

Document No. 1749 of 2018 of Govt.
Contains all Sheets 18 Sheet
[Signature]
Registering Officer





IN WITNESS where of 1) Tmt. K.M. Mathiahagan, 58-B Gandhi Nagar, Krishnagiri Town and Taluk, A.M. Shivani D/o D. Mathiahagan D. No. 58-B Gandhi Nagar, Krishnagiri Town and Taluk "the registered holders" M/s Davarajaa M. Sand, No. 58 B Gandhi Nagar, Krishnagiri Town and Taluk Represented by its Managing Partner Thiru D. Mahiahagan "the Lessee" and Thiru C. KATHIRAVAN, I.A.S the Collector of Krishnagiri District acting for and on behalf of and by the order and direction of the Governor of Tamil Nadu have "The Lessor" hereunto set their hands.

[Handwritten Signature]
[Handwritten Signature]
REGISTERED HOLDERS
[Handwritten Signature]
LESSEE

Signed by the above named lessee in the presence of following witnesses.

[Handwritten Signature]
DISTRICT COLLECTOR

Signed by the above named lessor in the presence of following witnesses.

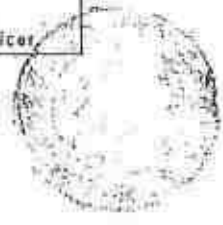
① N. SIVU. R. SELVARAJ.
S/o. D. Mathiahagan.
No. 14, D. Road, Jakkampalayam
Krishnagiri.

[Handwritten Signature]
DEPUTY DIRECTOR
Department of Geology and Mining
Collectorate, Krishnagiri.

[Handwritten Signature]
② K. Manjuranathan
No. 5. C.B. Road Bangalore
Krishnagiri

[Handwritten Signature]
ASSISTANT GEOLOGIST
C/o. the Dept. of Geology and Mining,
Collectorate, Krishnagiri.

Document No. 1744 of 2018 of Book 1
Contains 28 Sheets 19 Sheet
[Handwritten Signature]
Registering Officer



ச. பி. சீரம்புரி

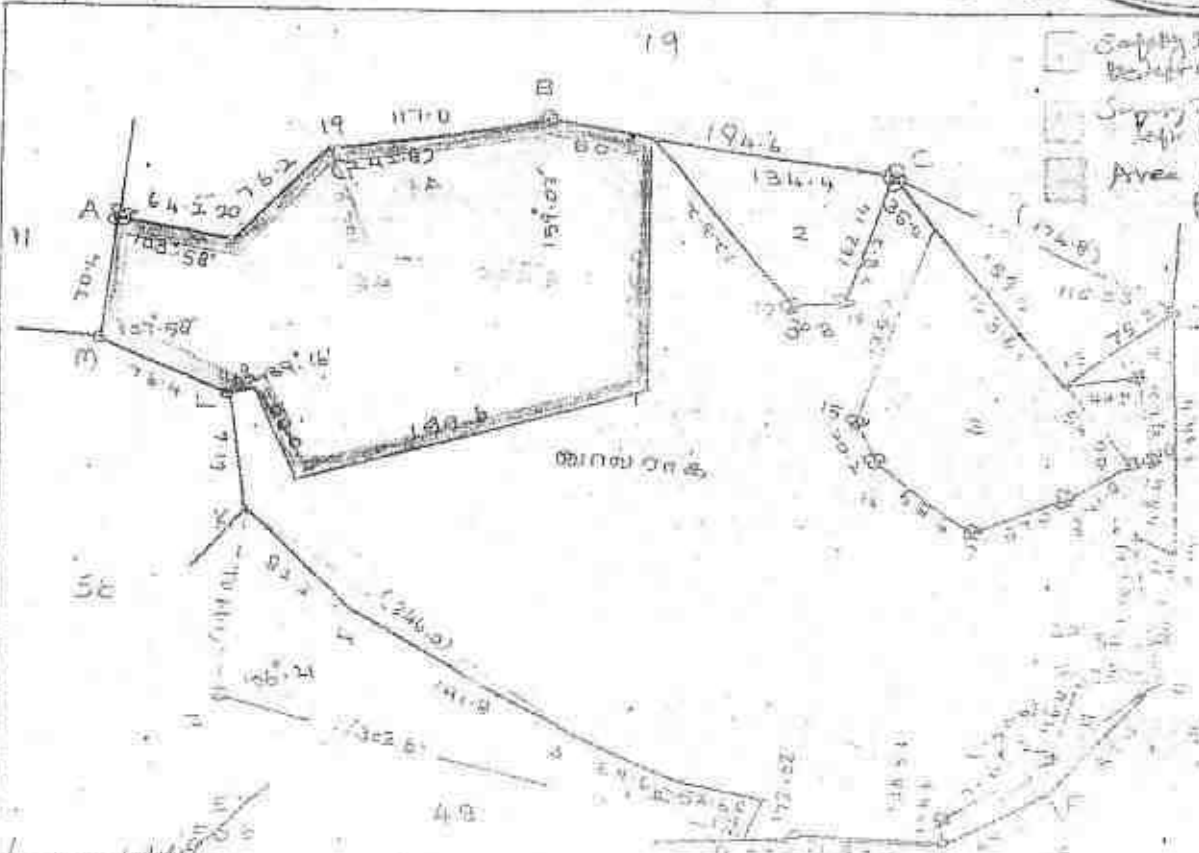
வட்டம் கிருஷ்ணகிரி

புல எண். 7B

அளவைப்பரப்பு. எண் 23

எண். 1214
ஆராமம்
பொ. 16

பரப்பு: நெக்கோர் 16 ஏ.



- Safety Zone (10m)
- Survey Zone (10m)
- Area Under Etc. for Survey.

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REGISTERED HOLDER.

Document No. 1714 of 2018 of Book 1
Contains 28 Sheets 30 Sheet
Registering Officer

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LESSEE

15	1390	127	
14	1478	109	
13	884	21	
12			
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Village: KOTHA PETTA
KRISSNAGIRU TK & DT.



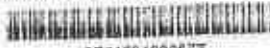
தமிழ் குடியேற்ற அமைச்சு, அமைச்சு அலுவலகம்

இந்திய அரசாங்கம்
Unique Identification Authority of India
Government of India

பதிவு அட்டை எண் / Enrollment No 2013/9110701531

To
 K.M Vijaya
 W/O. Muthurajam
 O No 22 B
 GANESH NAGAR
 BASHEER MOHAMMED LAYOUT KRISHNAPUR
 Krishnapur
 Krishnaperi, Krishnaperi, Krishnaperi
 Tamil Nadu 635001
 9953344100

Ref: 1517 / 020 / 412050 / 412216 (1)



2E6160430327T



உங்கள் ஆதார் எண் / Your Aadhaar No.:

2366 8930 3919

ஆதார் - சாதாரண மனிதனின் அதிகாரம்



இந்திய அரசாங்கம்
Government of India



K.M Vijaya
 23/07/1967
 Unmarried Female



2366 8930 3919

ஆதார் - சாதாரண மனிதனின் அதிகாரம்



உய்வகம்

- ஆதார் அட்டை உடையதற்கான சான்று குடியேறியமைக்கு அல்ல.
- அட்டையான சான்றை இணையதளம் மூலம் உறுதிப்படுத்திக் கொள்ளவும்.

INFORMATION

- Aadhaar is proof of identity, not of citizenship.
- To establish identity, authenticate online.

ஆதார் நாடு முழுவதும் செயல்திறம்

வருங்காலத்தில் அரசு மற்றும் அரசு சார்பு சேவைகளை பயன்படுத்தும் போது உதவியளிக்க திட்டமிடும்.

Aadhaar is valid throughout the country.

Aadhaar will be helpful in availing Government and Non-Government services in future.



இந்திய அரசாங்கம்
Unique Identification Authority of India

பதிவு அட்டை எண் / Enrollment No 2013/9110701531
 ஆதார் எண் / Aadhaar No 2366 8930 3919
 பதிவு செய்த நாள் / Date of Enrollment 23/07/2017

Address: W/O. Muthurajam, O No 22 B, GANESH NAGAR, BASHEER MOHAMMED LAYOUT, KRISHNAPUR, Krishnapur, Krishnaperi, Krishnaperi, Tamil Nadu 635001

2366 8930 3919



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 Officer





இந்தியாவின் அடையாள அமைப்பு

இந்திய அரசாங்கம்
Unique Identification Authority of India
Government of India

பதிவு அடையாளம் / Enrollment No 2043/9910701533

To:
 சிவனி அம்ம்
 ShivanIAM
 D/O Mathazhagan
 D NO 68 B
 GANDHI NAGAR
 BABEER MOHAMMED LAYOUT KRISHNAGIRI
 Krishnagiri
 Krishnagiri Krishnagiri
 Tamil Nadu 635001
 896544198

Ref: 1567 / 020 / 471080 / 4120EB / P



5E618642220FT



உங்கள் ஆதார் எண் / Your Aadhaar No.:

6470 2937 6605

ஆதார் - சாதாரண மனிதனின் அதிகாரம்



இந்திய அரசாங்கம்
 Government of India



சிவனி அம்ம்
 ShivanIAM
 பதிவு எண் (DOB): 05051997
 Registration / Female



6470 2937 6605

ஆதார் - சாதாரண மனிதனின் அதிகாரம்

தகவல்

- ஆதார் அடையாளத்திற்கான சான்று குடிபரிமாசு அல்ல
- அடையாள எண்ணை இணையதளம் மூலம் உறுதிப்படுத்திக் கொள்ளவும்

INFORMATION

- Aadhaar is proof of identity, not of citizenship.
- To establish identity, authenticate online.

- ஆதார் நாடு முழுவதிலும் செல்லுபடியாகும்
- வருங்காலத்தில் அரசு மற்றும் அரசு காரி சேவைகளை பயன்படுத்திக் கொள்ள ஆதார் உதவிகளாக இருக்கும்

- Aadhaar is valid throughout the country.
- Aadhaar will be helpful in availing Government and Non-Government services in future.



இந்திய அரசாங்கம்
 Unique Identification Authority of India

முகவரி: தலை மதுராபுரம்
 அண்மை எண்: 40501
 அண்மை எண்: 40501
 கிருஷ்ணகிரி கிருஷ்ணகிரி
 கிருஷ்ணகிரி கிருஷ்ணகிரி

Address: D/O Mathazhagan, D
 NO 68 B, GANDHI NAGAR,
 BABEER MOHAMMED
 LAYOUT, KRISHNAGIRI,
 Krishnagiri, Krishnagiri, Tamil
 Nadu, 635001

6470 2937 6605



Document No. 1744 of 2018 of Book
 Contains 28 Sheets 22 Sheet
 Registration No.



22/10/1980

TN29Z1980000257
K V VENKATASAMY MANAGER
MADHAI PA GUANTHIL

UNION CO OP BANK LTD
KUNTHALAGIRI-635 001

2004 1981



Document No. 1744 of 2023 of 1st Hou /

Contai. 28 Sivas 24 Sivas

A
Registering Officer



भारत सरकार
GOVERNMENT OF INDIA



அதியமான் அன்பழகன்
Adiyaman Anbalagan
பிறந்த நாள் / DOB: 06/05/1983
ஆண் / MALE



5206 0869 7635

புள்ளிப் பதிவுகளின் அலுவலகம்



भारतीय विश्वविद्यालय
UNIQUE IDENTIFICATION AUTHORITY OF INDIA



1800 300 1801



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www.uidai.gov.in

P.O. Box No. 2647, Bangalore-560 001

Page No. of Book 1
Page No. 28 of 25 Sheet
Registering Officer.

R/1 எண் இணை சார்பதிவாளர் கிருஷ்ணகிரி/புத்தகம்-1



1899ம் ஆண்டு இந்திய முத்திரைச் சட்டம் 42வது பிரிவின் கீழான சான்று

2018ம் ஆண்டு வரிசை எண் 572

588, காந்தி நகர், கிருஷ்ணகிரி, கிருஷ்ணகிரி, தமிழ்நாடு, இந்தியா, 635001-ல் வசிக்கும் திருமதி விஜயா என்பவரிடமிருந்து ₹ 7,19,320/- ரூபாய் ஏழு இலட்சத்து பத்தொன்பதாயிரத்து முந்நூற்று இருபது மட்டும் இந்த ஆவணத்திற்காக இந்திய முத்திரைச் சட்டம் 41வது பிரிவின் படி குறைவாயிருந்த முத்திரைக் கட்டணம் வசூலிக்கப்பட்டது என நான் இதன் மூலம் சான்றளிக்கிறேன்.

சார்பதிவாளர் : 1 எண் இணை சார்பதிவாளர் கிருஷ்ணகிரி சார்பதிவாளர் மற்றும் இந்திய முத்திரைச் சட்டம் பிரிவு நான் 21/06/2018 41ன் படி ஆட்சியர்

Chelliar

2018 ஆம் ஆண்டு ஜூன் மாதம் 21ம் தேதி பி.பி 04:19 மணியளவில் 1 எண் இணை சார்பதிவாளர் கிருஷ்ணகிரி சார்பதிவாளர் அலுவலகத்தில் தாக்கல் செய்து கட்டணம் ₹ 20,375/- செலுத்தியவர்.

இடது பெருவிரல்



Handwritten signature of the person.

சுட்டுதல் விவரங்கள் ஆவண வாசகத்தில் உள்ளபடி

பதிவுச் சட்டம் பிரிவு 38ஏன் கீழ் நேரில் வருவதனிலிருந்து விலக்களிக்கப்பட்ட திரு. மாவட்ட ஆட்சியர், தமிழ்நாடு, இந்திய அவர்களால், இந்த ஆவணம் எழுதிக் கொடுத்தமை குறித்து நான் மனநிறைவடைந்துள்ளேன்.

சார்பதிவாளர் : 1 எண் இணை சார்பதிவாளர் கிருஷ்ணகிரி

எழுதி வாங்கியதாக ஒப்புக் கொண்டவர் இடது பெருவிரல்



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சுட்டுதல் விவரங்கள் ஆவண வாசகத்தில் உள்ளபடி

எழுதி வாங்கியதாக ஒப்புக் கொண்டவர் இடது பெருவிரல்



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சுட்டுதல் விவரங்கள் ஆவண வாசகத்தில் உள்ளபடி

Document No. 1/2018 of 2018 of Book 1

21

02



1749/2



**தமிழ்நாடு அரசு
பதிவுத்துறை
ஒப்புக்கைச்சீட்டு**

பார்வைக்குறிப்பு விவரங்கள்

சார்பதிவாளர் அலுவலகப் பெயர்	1 எண் இணை சார்பதிவாளர் கிருஷ்ணகிரி
விண்ணப்ப எண்	S01LANDVV201806130498121
பரிவர்த்தனை எண்	REG201806130469130
பரிவர்த்தனை நாள்	13/06/2018

விண்ணப்ப விவரங்கள்

விண்ணப்பதாரர் பெயர்	VIJAYA
சேவை வகை	சார்பதிவாளர் அலுவலகத்தில் ஆவணப் பதிவு (புதியது)
முத்திரைத்தீர்வை (₹)	114820/-
பதிவுக் கட்டணம் (₹)	20000/-

தொகை செலுத்திய விவரங்கள்

வங்கியின் பெயர்	பாரத ஸ்டேட் வங்கி
வங்கிக்குறிப்பு எண்	IK0000JBS5
பணம் செலுத்திய விதம்	இணைய வழி
செலுத்தப்பட்ட தொகை (₹)	134820/-
தொகை செலுத்தும் நிலைப்பாடு	வெற்றி
தொகை செலுத்திய நாள்	13/06/2018

600 500
100 220
114820

Document No. 1749/2018 of Book 1
Contains _____ Sheets 28 Sheet

S.DHANASEKAR, M.Sc., (Geo)
Qualified Person



S.DHANASEKAR, M.Sc., (Geo)
Qualified Person

THIRU C.KATHIRAVAN, I.A.S.,
CHAIRMAN/
DISTRICT COLLECTOR.

Krishnagiri District
Environment Impact
Assessment Authority,
Room No.30, Collectorate,
Krishnagiri.



ENVIRONMENTAL CLEARANCE

Lr.No.35/DEIAA-KGI/EC.No.27/2018 dated: 27.02.2018

To

Sri Devaraajaa 'M' Sand
No.58B Gandhi Nagar,
Krishnagiri Town and District

Sir,

Sub: DEIAA - Application for Environment Clearance for the Proposed Rough Stone quarrying over an extent of 4.00.0 Hects. in patta land S.F.Nos. 78/1A(Part) and 78/1B(Part) Kothabetta village of Krishnagiri Taluk and District preferred by Sri Devaraajaa 'M'Sand No.58B Gandhi Nagar, Krishnagiri Town and District - Issue of Environmental Clearance - Reg.

Ref: 1.Sri Devaraajaa 'M' Sand Application for Environment Clearance dated 02.01.2018.
2.Minutes of the DEAC meeting conducted on.02.02.2017
3.Minutes of the DEIAA meeting held on 23.02.2018

-o0o-

Details of Minor mineral Activity:-

This has reference to your application first cited. The proposal is for obtaining Environmental Clearance for mining / quarrying of minor mineral rough stone based on the particulars furnished in your application as shown below:

1.	Name of Project Proponent and address	Sri Devaarajaa'M'Sand No.58B Gandhi Nagar, Krishnagiri Town and District
2.	Location of the Proposed Activity	
	Survey Number and Extent	78/1A(Part) 78/1B(Part) Extent :4.00.0 hect.
	Latitude and Longitude	12° 32'45.49" N to 12° 32'49.88" N 78° 12'39.28" E to 78° 12'49.42" E
	Topo Sheet No.	57L/2

	Village	Kothabetta
	Taluk	Krishnagiri
	District	Krishnagiri District
3.	Proposed Activity	
	i. Minor mineral	Rough Stone
	ii. Mining Lease Area	4.00.0 Hects.,
	iii. Approved quantity	10,25,995cbm of Rough Stone
	iv. Depth of Mining	71mts (25 Mts. above ground level and 46 Mts above below ground level) from a period of 5 years
	v. Type of mining	Open cast semi mechanized mining.
	vi. Category (B1/B2)	B2
	vii. Precise Area Communication	The District Collector Roc.No.418/2017/Mines dated:02.12.2017
	viii. Mining Plan approval	Mining Plan approved by the Deputy Director of Geology of Mining Krishnagiri Lr.No.418/2017/Mines dated: 29.12.2017
	ix. Mining lease period	5 years
4.	Whether Project area attracts any general conditions specified in the EIA notification, 2006 as amended:-	Not attracted Affidavit furnished
5.	Man Power requirement per day	18 Employees
6.	Utilities	
	i. Source of Water	a. For Drinking and Domestic purpose water will be purchased from approved water vendors. b. For dust suppression and green belt development water from the existing bore hole situated near by the quarry area will be used.
	ii. Quantity of Water Requirement in KLD:	
	a. Domestic & Drinking	0.750 kilo litre
	b. Industrial	--
	c. Green Belt & Dust Suppression	1.500 kilo litre
	iii. Power requirement	
	a. Domestic purpose	TNEB
	b. Industrial purpose	Fuels is used for operating machineries and vehicles during the quarrying process and transportation and the fuel required for the entire project life is 826712 Lts. of HSD.

(4). The project proponent shall comply the conditions laid down in the Section V, Rule 36 of Tamil Nadu Minor Minerals Concession Rules 1959

(5). A copy of the Environment Clearance letter shall be sent by the proponent to the concerned Panchayat, Town Panchayat / Panchayat Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the proponent and also kept at the site, for the general public to see.

(6). Quarry lease area should be demarcated on the ground with wire fencing to show the boundary of the lease area on all sides with red flags on every pillar shall be erected before commencement of quarrying.

(7). The proponent shall ensure that First Aid Box is available at site.

(8). The excavation activity shall not alter the natural drainage pattern of the area.

(9). The excavated pit shall be restored by the project proponent for useful purposes. **In this regard, the proponent shall deposit a sum of Rs.5,00,000/- (Rupees Five Lakhs only) in the name of District Collector Krishnagiri in the form of fixed deposit. The said fixed deposit will be refunded after restoration of pit after end of the lease period.**

(10). The proponent shall quarry and remove only in the permitted areas as per the approved Mining Plan details.

(11). The quarrying operation shall be restricted between 7 AM and 5 PM.

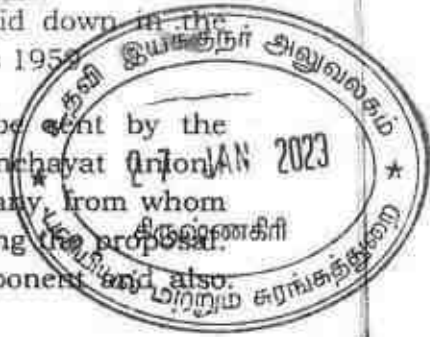
(12). The proponent shall take necessary measures to ensure that there shall not be any adverse impacts due to quarrying operation on the nearby human habitations, by way of pollution to the environment.

(13). A minimum distance of 15 mts. From any civil structure shall be kept from the periphery of any excavation area.

(14). Depth of quarrying shall be 2m above the ground water table /approved depth of mining whichever is lesser to be considered as a safe guard against Environmental Contamination and over exploitation of resources.

(15). The mined out pits should be backfilled where warranted and area should be suitably landscaped to prevent environmental degradation. The mine closure plan as furnished in the proposal shall be strictly followed with back filling and tree plantation.

(16). Wet drilling method is to be adopted to control dust emissions. Delay detonators and shock tube initiation system for blasting shall be used so as to reduce vibration and dust.



7.		Cost	
	i.	Project Cost	Rs.30,30,000/-
	ii.	EMP Cost	Rs.3,70,000/-
8.	Public Consultation:-		Not required as per O.M. dated 24.12.2013 of MoEF, GOI
9.	Date of Appraisal by DEAC: Agenda No.		Agenda No.14 of 3 rd meeting of DEAC conducted on 02.02.2018
10.	Date of review / discussion by DEIAA and the Remarks:- The proposal was placed before the DEIAA in its 3 rd meeting on 23.02.2018 as agenda No.14 and the authority after careful consideration, decided to grant Environmental Clearance to the said project of Mining of rough stone subject to terms and conditions stipulated under the provisions of Environment Impact Assessment Notification, 2006 as amended.		
11.	Validity: This Environmental Clearance is granted to Mining of Rough Stone for the production quantity of 870546 Cbm of rough stone for the period of five years from the date of execution of the mining lease period.		
12.	NBWL Clearance: The proposal area situated 26.16km away from The Cauvery Wild Life Sanctuary and it does not Attract NBWL clearance.		
13.	Special Condition: i. Ground Water Quality test should be conducted periodically, Water collected in the pit should be pumped via Settling Tank. ii. Water Sprinkler arrangements to be provided to suppress dust emission. iii. Environment Management plan should be submitted before execution of lease deed.		

Conditions to be Compiled before / during commencing operations:-

(1) The project proponent shall advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing the public that

- i) The project has been accorded Environmental Clearance.
- ii) Copies of clearance letters are available with the Tamil Nadu Pollution Control Board.
- iii) Environmental Clearance may also be seen on the website of the State Level Environment Impact Assessment Authority.
- iv) The advertisement should be made within 7 days from the date of receipt of the clearance letter and a copy of the same shall be forwarded to the SEIAA.

(2). The applicant has to obtain land use classification as industrial use before issue/renewal of mining lease.

(3). NOC from the Standing committee of the NBWL shall be obtained, if protected areas are located within 10 Km from the proposed project site.

(17). Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities.

(18). The explosives shall be stored at site as per the conditions stipulated in the permits issued by the licensing Authority.

(19). Blasting shall be carried out after announcing to the public adequately through public address system to avoid any accident.

(20). A study has to be conducted to assess the optimum blast parameters and blast design to keep the vibration limits less than prescribed levels and only such design and parameters should be implemented while blasting is done. Periodical monitoring of the vibration at specified location to be conducted and records kept for inspection.

(21). The Proponent shall take appropriate measures to ensure that the GLC shall comply with the revised NAAQ norms notified by MoEF, GoI on 16.11.2009. **(GLC = Ground Level Concentration), (NAAQ = Noise and Ambient Air Quality)**

(22). The following measures are to be implemented to reduce Air Pollution during transportation of mineral

- (i). Roads shall be graded to mitigate the dust emission.
- (ii). Water shall be sprinkled at regular interval on the main road and other service roads to suppress dust.

(23). The following measures are to be implemented to reduce Noise Pollution

- (i). Proper and regular maintenance of vehicles and other equipment.
- (ii). Limiting time exposure of workers to excessive noise.
- (iii). The workers employed shall be provided with protection equipment and earmuffs etc.
- (iv). Speed of trucks entering or leaving the mine is to be limited to moderate speed of 25 kmph to prevent undue noise from empty trucks.

(24). Measures should be taken to comply with the provisions laid under Noise Pollution (Regulation and Control) (Amendment) Rules, 2010, dt: 11.01.2010 issued by the MoE&F, GoI to control noise to the prescribed levels.

(25). Suitable conservation measures to augment groundwater resources in the area shall be planned and implemented in consultation with **Assistant Director, Ground Water Division, PWD, Dharmapuri.**

(26) **Rain water harvesting to collect and utilize the entire water falling in land area should be provided by construction of a storage tank with a capacity of 5,00,000 litres and the rain water harvested in the entire quarry**



area should be stored in it and used for the quarry purpose like dust prevention, wet drilling, providing water for green belt etc.

(27). Permission from the competent authority should be obtained for drawl of ground water, if any, required for this project.

(28). Topsoil, if any, shall be stacked properly with proper slope with adequate measures and should be used for plantation purpose.

(29). The following measures are to be adopted to control erosion of dumps:-

(i). Retention/ toe walls shall be provided at the foot of the dumps.

(ii). Worked out slopes are to be stabilized by planting appropriate shrub/ grass species on the slopes.

(30). Waste oils, used oils generated from the EM machines, mining operations, if any, shall be disposed as per the Hazardous Wastes (Management, Handling, and trans boundary movement) Rules, 2008 and its amendments thereof to the recyclers authorized by TNPCB.

(31). Concealing the factual data or failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

(32). Rain water getting accumulated in the quarry floor shall not be discharged directly to the nearby stream or water body. If it is to be let into the nearby water body, it has to be discharged into a silt trap on the surface within the lease area and only the overflow after allowing settling of soil be let into the nearby waterways. The silt trap should be of sufficient dimensions to catch all the silt water being pumped out during one season. The silt trap should be cleaned of all the deposited silt at the end of the season and kept ready for taking care of the silt in the next season. **Photographs of the silt trap should be furnished before commencing quarry operation.**

(33). The lease holder shall undertake adequate safeguard measures during extraction of material and ensure that due to this activity, the hydro-geological regime of the surrounding area shall not be affected. Regular monitoring of ground water level and quality shall be carried out around the mine lease area during the mining operation. If at any stage, **that the ground water is getting depleted due to the quarrying activity, necessary corrective measures shall be carried out. The Assistant Director Ground water Division, PWD Dharmapuri shall monitor.**

(34). No tree-felling shall be done in the leased area, except only with the permission from competent Authority.

(35). To take up environmental monitoring of the proposed quarry site before, during and after the mining activities including vibration study data, water, air & flora/fauna environment, slurry water generated/disposed and method of

disposal, involving a reputed academic Institution **and it should be monitored by the District Environmental Engineer, TNPCB, Hosur on yearly basis.**

(36). It shall be ensured that the total extent of nearby quarries (existing, abandoned and proposed) located within 500 meter radius from the periphery of this quarry is not exceeding 25 hectares within the mining lease period of this application.

(37). It shall be ensured that there is no habitation is located within 500 meter radius from the periphery of the quarry site and also ensure that no hindrance will be caused to the people of the habitation located within 500m radius from the periphery of the quarry site

(38). Ground water quality monitoring should be conducted once in 3 Months.

(39). Transportation of the quarried materials shall not cause any hindrance to the Village people/Existing Village road.

(40). Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI **once in three months.**

(41). Air sampling at intersection point should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI **periodically once in six months.**

(42). Bunds should be provided at the boundary of the project site **and it should be properly maintained.**

(43). The project proponent shall undertake plantation/ afforestation work by planting the native species on all side of the lease area at the rate of 400/Ha. Suitable tall tree saplings should be planted on the bunds and other suitable areas in and around the work place.

(44). At least 10 Neem trees should be planted around the boundary of the quarry site.

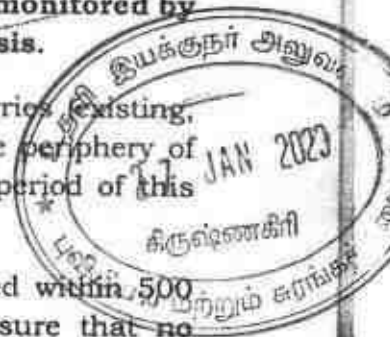
(45). Floor of excavated pit to be leveled and sides to be sloped with gentle slope (Except for granite quarries) in the mine closure phase.

(46). The Project Proponent shall ensure a minimum of 2.5 of the annual turnover will be utilized for the CSR Activity.

(47). The Project Proponent shall provide solar lighting system to the nearby villages.

(48). The Project Proponent shall comply with the mining and other relevant rules and regulations where ever applicable.

(49). Rainwater shall be pumped out Via Settling Tank only



(50). Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary shall be developed and maintained.

(51). As per MoEF & CC, GoI, Office Memorandum dated 30.03.2015, prior clearance from Forestry & Wild Life angle including clearance from obtaining committee of the National Board for Wild life as applicable shall be obtained before starting the quarrying operation, if the project site is located within 10KM from National Park and Sanctuaries.

(52). The quarrying activity shall be stopped if the entire quantity indicated in the Mining plan is quarried even before the expiry of the quarry lease period and the same shall be monitored by the District Authorities.

(53) Safety equipments to be provided to all the employees.

(54) Safety distance of 50 m has to be provided in case of railway, reservoir, canal/odai

(55) The Assistant / Deputy Director Department of Geology and Mining shall ensure that the proponent has engaged the blaster with valid Blasting license /certificate obtained from the competent authority before execution of mining lease.

(56) The proponent shall furnish the Baseline data covering the Air, Water, Noise and land environment quality for the proposed quarry site before execution of mining lease.

(57) The proponent shall erect the pillars in accordance with the Rules for depicting GPS details in the earmarked boundary of the quarry site to monitor electronically before execution of mining.

(58) The proponent shall furnish the data obtained from the Public Works Department regarding the details of ground water table in the quarry site.

(59) The proponent has to provide insurance protection to the workers in the case of existing mining or provide the affidavit in case of fresh case before execution of mining lease.

(60) The proponent has to display the name board at the quarry site showing the details of proponent, leased period, extent etc., with respect to the existing activity before execution of mining.

(61) Heavy earth machinery equipments if utilized, after getting approval from the competent authority.

(62) The environmental norms shall be monitored by the District Environmental Engineer, Tamil Nadu Pollution Control Board, Hosur.

(63) The Assistant Director Public Works Department, Ground Water Division Dharmapuri shall monitor whether the quarrying activity is carried out above the ground water level on yearly basis.

(64) NOC for sanitary certificate shall be obtained from the Deputy Director of Health Services, Krishnagiri.

(65) **Yearly** medical examination of the quarry workers should be carried out by a registered medical practitioner and the report should be filed in the quarry office in a separate file and copy should be sent to the Deputy Director, Health Services, Krishnagiri.

(66) **Closed circuit camera** should be erected at the quarry site and the passage of vehicles in and out of the quarry should be recorded and the footage of the recordings of the camera should be maintained and should be produced before the enforcing officials when ever called for.

(67) **Vehicles used for transportation of quarried materials** should be fitted with GPS and monitored.

(68) **Pit Mouth register** should be maintained in online

(69) **Auditor report on the annual turnover amount** should be submitted to the District Collector within one month from the end of the financial year.

(70) **02.5% of the turn over amount** should be utilized for the CSR activity after consultation with the District Collector.

B. General Conditions:

(1) EC is given only on the factual records, documents and the commitment furnished in non judicial stamp paper by the proponent.

(2) The Proponent shall obtain the Consent for Establishment from the TNPC Board before commencing the activity.

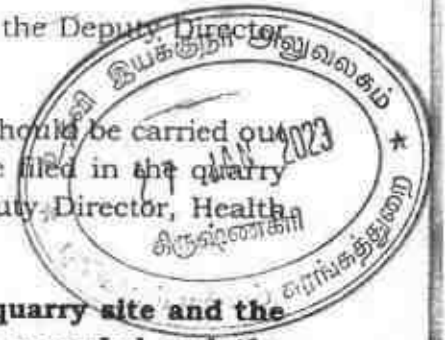
(3) No change in mining technology and scope of working should be made without prior approval of the SEIAA, Tamil Nadu.

(4) No change in the calendar plan including excavation, quantum of mineral (minor mineral) should be made.

(5) Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.

(6) Effective safeguards shall be adopted against health risks on account of breeding of vectors in the water bodies created due to excavation of earth.

(7) A berm shall be left from the boundary of adjoining field having a width equal to at least half the depth of proposed excavation.



(8) Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.

(9) Vehicular emissions shall be kept under control and be regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying them mineral shall not be overloaded.

(10) Access and haul roads to the quarrying area should be restored in a mutually agreeable manner where these are considered unnecessary after extraction has been completed.

(11) All Personnel shall be provided with protective respiratory devices including safety shoes, Masks, gloves etc. Supervisory people should be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.

(12) Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly. The workers shall be provided with personnel protective measures such as masks, gloves, boots etc.

(13) Workers/labourers shall be provided with facilities for drinking water and sanitation facility for Female and Male separately.

(14) The project proponent shall ensure that child labour is not employed in the project as per the sworn affidavit furnished.

(15) The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its regional office located at Chennai.

(16) The Environmental Clearance does not absolve the applicant/proponent of his obligation/requirement to obtain other statutory and administrative clearances from other statutory and administrative authorities.

(17) This Environmental Clearance does not imply that the other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would be considering the project on merits and be taking decisions independently of the Environmental Clearance

(18) The DEIAA, Krishnagiri may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.

(19) The DEIAA, Krishnagiri may cancel the environmental clearance granted to this project under the provisions of EIA Notification, 2006, at any stage of the validity of this environmental clearance, if it is found or if it comes to the knowledge of this DEIAA that the project proponent has deliberately concealed and/or submitted false or misleading information or inadequate data for obtaining the environmental clearance.

(20) Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.

(21) The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability Insurance Act, 1991, along with their amendments, draft Minor Mineral Conservation & Development Rules, 2010 framed under MMDR Act 1957, National Commission for protection of Child Right Rules, 2006 and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/Hon'ble High Court of Madras and any other Courts of Law relating to the subject matter.

(22) Any other conditions stipulated by other Statutory/ Government authorities shall be complied.

(23) Any appeal against this environmental Clearance shall lie with the Hon'ble National Green Tribunal, if preferred within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act 2010

Sd/-C.Kathiravan
**CHAIRMAN DEIAA-KGI/
DISTRICT COLLECTOR,
KRISHNAGIRI.**

//True Copy//By Order//

For **CHAIRMAN DEIAA-KGI/
DISTRICT COLLECTOR,
KRISHNAGIRI**

Copy to

1. The Secretary, Ministry of Mines, Government of India , Shastri Bhawan, New Delhi
2. The Principal Secretary, Environment and Forest Department, Government of Tamil Nadu, Tamil Nadu.
3. The Principal Secretary to Government, Industries Department, Government of Tamil Nadu, Tamil Nadu.
4. The Additional Principal Chief Conservator of Forests, Regional Office (SZ), 34, HEPC Building 1st & 2nd Floor, Cathedral Garden Road, Nungambakkam, Chennai-34.

S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex East Arjun Nagar, New Delhi 110 032.
6. The Member Secretary, State Level Environmental Impact Assessment Authority Tamil Nadu Panagal Building Saidapet, Chennai
7. The Chairman Tamil Nadu Pollution Control Board, 76.Mount Salai (Guindy, Chennai-32)
8. The Commissioner of Geology and Mining, Guindy, Chennai-32
9. E1 Division, Ministry of Environment and Forests Paryavaran Bhawan, New Delhi.
10. File No.02/ DEIAA/KGI/2017.



TAMILNADU POLLUTION CONTROL BOARD



RENEWAL OF CONSENT ORDER NO:2209146838715
DATE:16/08/2022



PROCEEDINGS NO.F.1681HSR/RS/DEE/TNP/HSR/W/2022 DATED: 16/08/2022



Sub :	Tamil Nadu Pollution Control Board – AUTO RENEWAL OF CONSENT – M/s. SRI DEVARAJAA M SAND ROUGH STONE QUARRY S.F No. 78/1A pt, 78/1B pt., KOTTAPETA Village, Krishnagiri Taluk, Krishnagiri District- Renewal of Consent for the operation of the plant and discharge of sewage and/or trade effluent under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act 6 of 1974) – Issued- Reg.
Ref :	1. CTO's Proc.No.F.1681HSR/RS/DEE/TNP/HSR/W/2018, Dated: 20/06/2018 2. Unit's OCMMS application No. 46838715 for Auto renewal, Dated 15.07.2022

Renewal Of Consent is hereby granted under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act, 6 of 1974) (hereinafter referred to as "The Act") and the rules and orders made there under to

The Managing Partner,
M/s. SRI DEVARAJAA M SAND ROUGH STONE QUARRY
S.F No. 78/1A pt, 78/1B pt.,
KOTTAPETA Village,
Krishnagiri Taluk,
Krishnagiri District.

Authorising the occupier to make discharge of sewage and /or trade effluent.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This RENEWAL OF CONSENT is valid for the period ending - May 31, 2023

R
VENKATESAN
District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR

POLLUTION PREVENTION PAYS

SPECIAL CONDITIONS



1. This renewal of consent is valid for operating the facility for the manufacture of products (Col. 2) at the rate (Col. 3) mentioned below. Any change in the products and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl.No.	Description	Quantity	Unit
a.	Product Details :-		
1.	Rough Stone quarrying in an extent of 4.00 hectare, Located at SF.No.78/1A pt, 78/1B pt, Kolhabetta Village, Krishnagiri Taluk & Krishnagiri District	1025895	Cubic Meter/Five Years
b.	By-Product Details :-		
c.	Intermediate Product Details :-		

2. This renewal of consent is valid for operating the facility with the below mentioned permitted outlets for the discharge of sewage/trade effluent. Any change in the outlets and the quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Outlet No.	Description of Outlet	Maximum daily discharge in KLD	Point of disposal
EFFLUENT TYPE :-			
Effluent Type : Sewage			
1.	Sewage	0.67	On Industry's own land
EFFLUENT TYPE :-			
Effluent Type : Trade Effluent			
OUTLET NUMBER	DESCRIPTION OF OUTLET	MAXIMUM DAILY DISCHARGE (IN KLD)	POINT OF DISPOSAL

Special Additional Conditions-

The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board /National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional Conditions-

Special Additional Conditions:

1. The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board /National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional conditions:

- The unit shall carryout the quarrying activity only with the quarry lease agreement made with the District collector, Krishnagiri.
- The unit shall comply all the conditions prescribed in the Environmental Clearance issued vide Lr No. 35/DEIAA-RG/EC No.27/2018 Dated 27/02/2018.
- The unit shall comply with the conditions imposed in the Mining Lease Agreement entered with the District Collector, Krishnagiri dated on 31/05/2018.
- The unit shall treat and dispose the sewage generated from the unit through Septic tank and Sook pit arrangement.
- The unit shall ensure that no trade effluent is generated at any stage of its manufacturing process.
- The unit's operation/ activity for the mining shall not disturb the nearby agricultural land if any at any circumstances.
- The unit shall take necessary precautionary measures to prevent any adverse impact on the nearby habitation.
- The consent issued is subject to the final outcome of National Green Tribunal (South Zone) in application No. 165/2013.
- In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification, failing which this order will be withdrawn without any notice and further action will be initiated against the unit as per law.
- The unit shall not use 'Use and throwaway plastics' such as plastic sheets used for food wrapping, spreading on dining table etc, plastic plates, plastic coated tea cups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastics flags irrespective of thickness, within the industry premises. Instead unit shall encourage use of eco friendly alternative such as banana leaf, arecanut palm plate, stainless steel, glass,

POLLUTION PREVENTION PAYS



porcelain plates/crps, cloth bag, jute bag etc.,

11. In case of revision of consent fee by the Government the unit shall remit the difference in amount within one month from the date of revision of consent fee. If the unit fails to do so, the Government shall take further action without any notice and further action will be initiated against the unit as per law.

R
VENKATESAN
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VENKATESAN
Date: 2022.01.27
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District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR



To
The Managing Partner,
M/s. SRI DEVARAJA M SAND ROUGH STONE QUARRY,
No.58, Gandhi Nagar, Krishnagiri Town & Krishnagiri District,
Pin: 635001

- Copy to:
1. The Commissioner, KRISHNAGIRI-Panchayat Union, Krishnagiri Taluk, Krishnagiri District.
 2. Copy submitted to the Member Secretary, Tamil Nadu Pollution Control Board, Chennai for favour of kind information.
 3. Copy submitted to the JCEE-Monitoring, Tamil Nadu Pollution Control Board, Vellore for favour of kind information.
 4. File

This is computer generated. Signature is not required.

POLLUTION PREVENTION PAYS



TAMILNADU POLLUTION CONTROL BOARD



POLLUTION PREVENTION PAYS



TAMILNADU POLLUTION CONTROL BOARD



RENEWAL OF CONSENT ORDER NO:2209246838715
DATE:16/08/2022



PROCEEDINGS NO.F.168IHSR/RS/DEE/TNPCB/HSR/A/2022 DATED: 16/08/2022

Sub:	Tamil Nadu Pollution Control Board - AUTO RENEWAL OF CONSENT -M/s. SRI DEVARAJAA M SAND ROUGH STONE QUARRY , S.F. No. 78/1A pt, 75/1B pt., KOTTAPETA village, Krishnagiri Taluk and Krishnagiri District- Renewal of Consent for operation of the plant and discharge of emissions under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) - Issued - Reg.
Ref:	1. CTO's Proc.No.F.168IHSR/RS/DEE/TNPCB/HSR/A/2018. Dated: 20/06/2018. 2. User's OCMMS application No. 46838715 for Auto renewal. Dated 15.07.2022.

Renewal of Consent is hereby granted under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) (hereinafter referred to as "The Act") and the rules and orders made there under to

The Managing Partner,
M/s : SRI DEVARAJAA M SAND ROUGH STONE QUARRY
S.F No. 78/1A pt, 75/1B pt.,
KOTTAPETA Village,
Krishnagiri Taluk,
Krishnagiri District,

Authorizing the occupier to operate the industrial plant in the Air Pollution Control Area as notified by the Government and to make discharge of emission from the stacks/chimneys.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This RENEWAL OF CONSENT is valid for the period ending - May 29, 2023

R
VENKATESAN
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R VENKATESAN
Date: 2022.08.17
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District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR.

POLLUTION PREVENTION PAYS



SPECIAL CONDITIONS



1. This renewal of consent is valid for operating the facility with the below mentioned emission/noise sources along with the control measures and/or stack. Any change in the products (Col. 2) at the rate (Col. 3) mentioned below. Any change in the products and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl.No.	Description	Quantity	Unit
Product Details :-			
1.	Rough Stone quarrying in an extent of 4.00 hectare, Located at SF.No.78/1A pt, 78/1B pt, Kothabetta Village, Krishnagiri Taluk & Krishnagiri District	1025995	Cubic Meter/Five Years
By-Product Details :-			
Intermediate Product Details :-			

2. This renewal of consent is valid for operating the facility with the below mentioned emission/noise sources along with the control measures and/or stack. Any change in the emission source/control measures/change in stack height has to be brought to the notice of the Board and fresh consent/Amendment has to be obtained.

I Point source emission with stack :				
Stack No	Point Emission sources	Air pollution Control measures provided	Stack height from Ground Level in m	Gaseous Discharge in Nm ³ /hr
II Fugitive/Noise emission :				
Sl.No.	Fugitive or Noise Emission sources	Type of Emission	Control measures provided	Quantity
1.	Vehicle Movement	Fugitive	Water Sprinkling System	
2.	Drilling	Fugitive	Water Sprinkling System	

Special Additional Conditions-

i. The unit shall install the approved retrofit emission control device/equipment with at least 70% Particulate matter reduction efficiency on all DG sets with capacity of 125 KVA and above or otherwise the unit shall be shift to gas based generators within the time frame prescribed in the notification No. TNPCB/Labs/DD(L)02151/2019 dated 10.06.2020 issued by TNPCB.

ii. The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board /National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional Conditions-

Special Additional Conditions:

i. The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board/National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional conditions:

- The unit shall carryout the quarrying activity only with the quarry lease agreement made with the District collector, Krishnagiri.
- The unit shall comply all the conditions prescribed in the Environmental Clearance issued vide Lr.No. 35/DE/IAA-KG/EC.No.27/2018 Dated 27/02/2018.
- The unit shall comply with the conditions imposed in the Mining Lease Agreement entered with the District Collector, Krishnagiri dated on 31/05/2018.
- The unit shall operate and maintain the APC measures in the form of portable water sprinklers effectively and continuously so as to satisfy the NAAQ / Emission standards prescribed by the Board.
- The unit shall adhere to the ANL standards as prescribed by the Board.
- The unit shall continue to develop more green belt with trees having thick canopy cover in the unit's premises.
- The unit's operation/ activity for the mining shall not disturb the nearby agricultural land if any at any circumstance.
- The unit shall take necessary precautionary measures to prevent any adverse impact on the nearby habitation.

POLLUTION PREVENTION PAYS



9. The consent issued is subject to the final outcome of the National Green Tribunal (South Zone) in application No. 165/2011.

10. In case of revision of consent to discharge, the applicant shall deposit the difference in amount within one month from the date of notification, failing which this order will be withdrawn without any notice and further action will be initiated against the unit as per law.

R VENKATESAN
Digitally signed by R Venkatesan
 District Environmental Engineer,
 Tamil Nadu Pollution Control Board,
 HOSUR



To
 The Managing Partner,
 M/s. SRI DEVARAJA M SAND ROUGH STONE QUARRY,
 No.58, Gandhi Nagar, Krishnagiri Town & Krishnagiri District,
 Pin: 625001

- Copy to:
1. The Commissioner, KRISHNAGIRI-Panchayat Union, Krishnagiri Taluk, Krishnagiri District.
 2. Copy submitted to the Member Secretary, Tamil Nadu Pollution Control Board, Chennai for favour of kind information.
 3. Copy submitted to the JCEE-Monitoring, Tamil Nadu Pollution Control Board, Vellore for favour of kind information.
 4. File

This is computer generated, Signature is not required.


S.DHANASEKAR, M.Sc. (Geo)
 Qualified Person

POLLUTION PREVENTION PAYS

ANNEXURE

அளவைப்படிவ. எண் 23



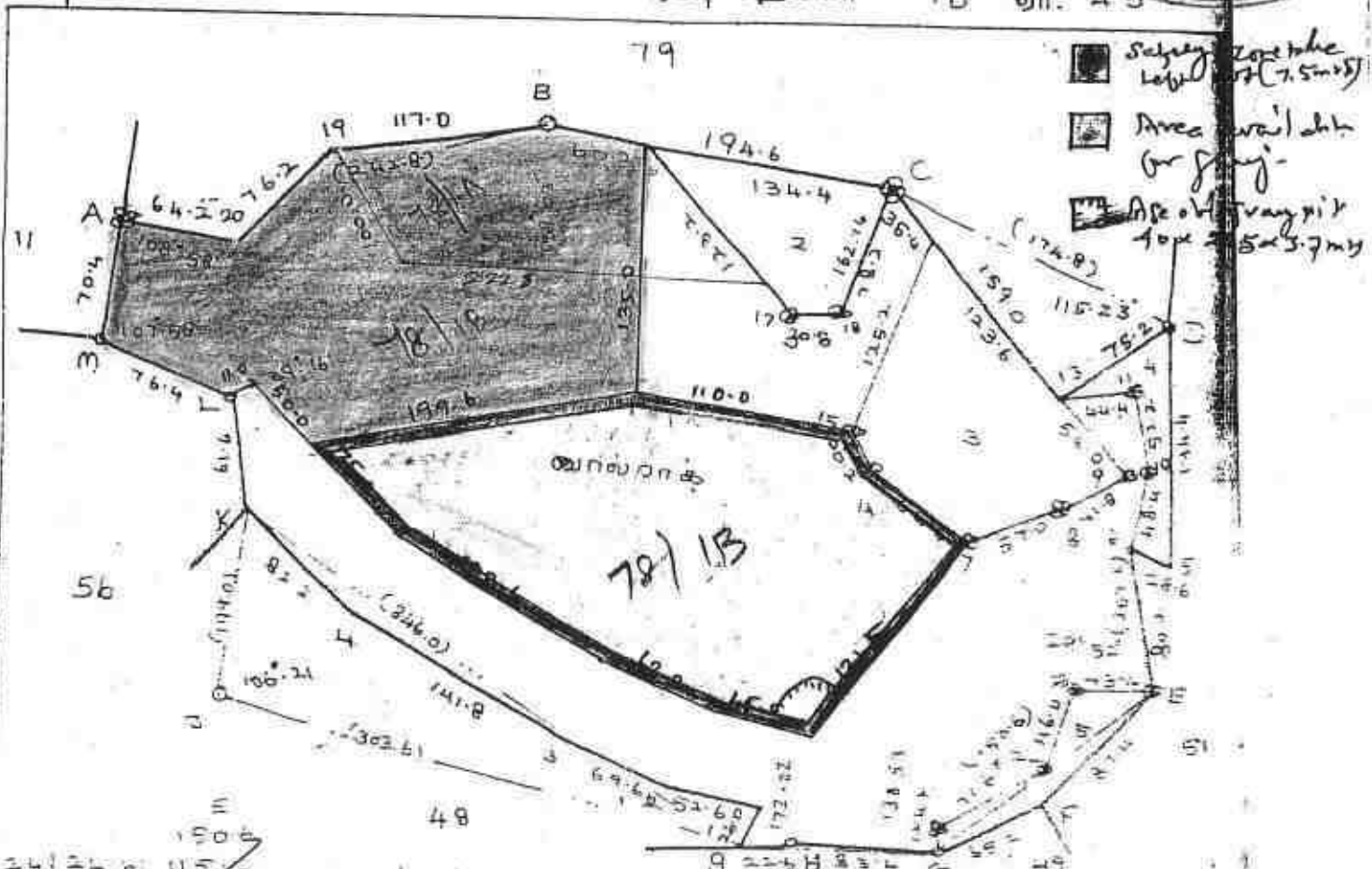
தர்மபுரி

வட்டம். கிருஷ்ணகிரி

புல எண். 78

எண். 12
கிராமம் {
பெயர். 6

பரப்பு: ஹெக்டேர் 16 ஏர். 43



- Survey Zone take Label (7.5m x 5)
- Area available for grazing
- Area of wasteland 10m x 5m x 3.7m

150.0	115.0	12.6	F		
24.0	24.0	11.5			
1.0	1.0	4.4			
194.6					
183.8					
153.8					
139.0	127.4				
147.8	109.2				
68.4	21.4				
139.0	127.4				
147.8	109.2				
68.4	21.4				
139.0	127.4				
147.8	109.2				
68.4	21.4				
139.0	127.4				
147.8	109.2				
68.4	21.4				

Village Administrative Officer
32, KOTHA PETTA,
KRISHNAGIRI TK. & DT.



சுயநிர்ணய கிருஷ்ணகிரி
அ.க.க.ப.ப.

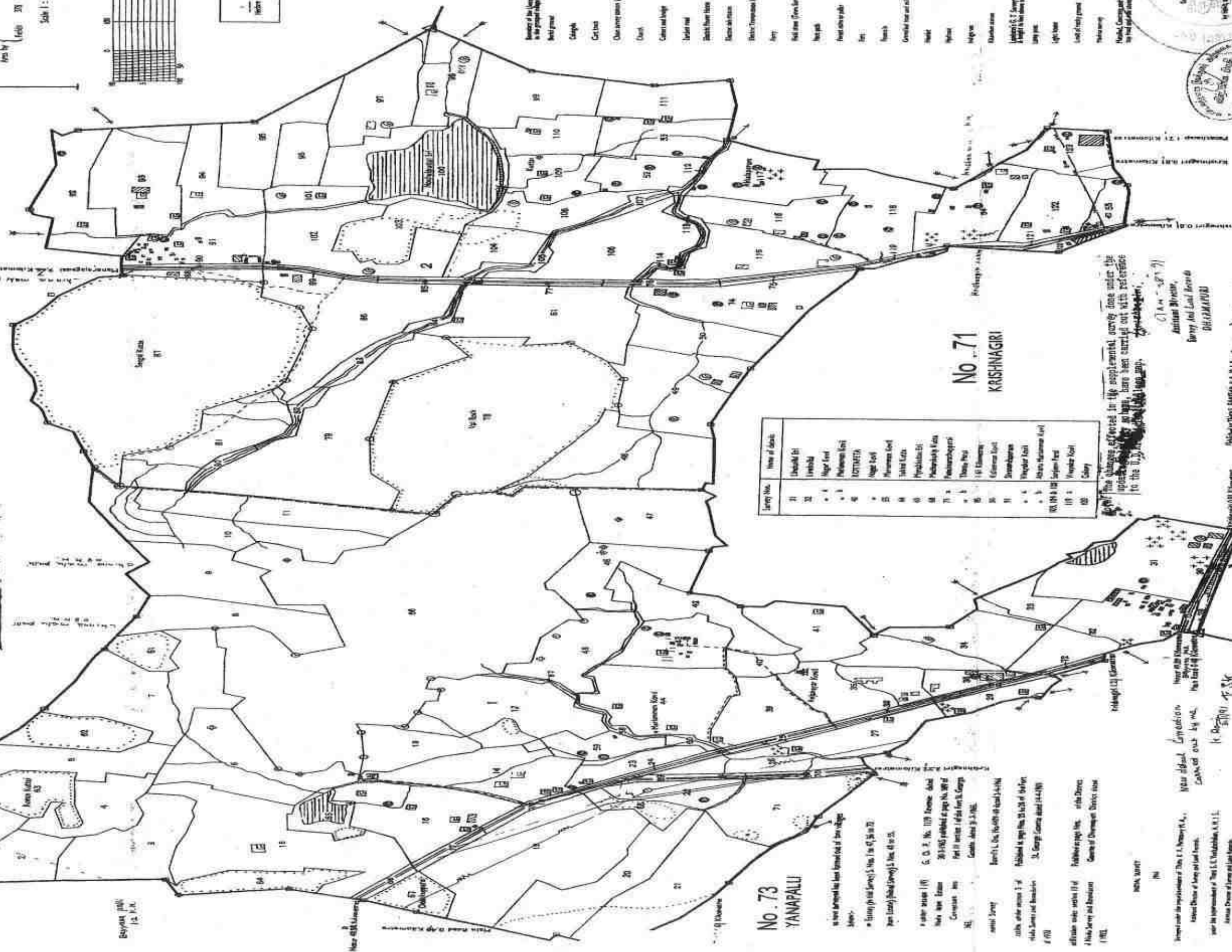
S.DHANASEKAR, M.Sc., (Geo)
Qualified Person

No. 72
KOTTAPETA

KRISHNAGIRI TALUK
KRISHNAGIRI DISTRICT

Area by
 Trees 28 Hectares 37.1 Acre
 Field 28 Hectares 33.8 Acre
 Scale 1:100

No. 68
KALLUGURIKKI



- SYMBOLS USED**
- Public road
 - Private road
 - Boundary wall
 - Fenced area
 - Uncultivated land
 - Cultivated land
 - Water body
 - Well
 - Tank
 - Electricity pylon
 - Telephone pylon
 - Tree
 - Boundary pillar
 - Survey line
 - Section line
 - Survey block boundary

Survey No.	Name of field
1	Subabdi
2	Venkat
3	Subabdi
4	Subabdi
5	Subabdi
6	Subabdi
7	Subabdi
8	Subabdi
9	Subabdi
10	Subabdi
11	Subabdi
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148	Subabdi
149	Subabdi
150	Subabdi

No. 73
YANAPALLI

No. 71
KRISHNAGIRI

The changes effected in the supplemental survey done under the provisions of the Act, have been carried out with reference to the original survey maps.

Major Surveying Engineer
 Survey of India
 Bangalore
 1962

(Signature)
 Assistant Director
 Survey and Land Revenue
 KRISHNAGIRI

(Signature)
 Assistant Director
 Survey and Land Revenue
 KRISHNAGIRI



S. DHANASEKAR, M.Sc. (Geo.)
 Qualified Person



தமிழக அரசு

வருவாய்த் துறை

நில உரிமை விபரங்கள் : இ. எண் 10(1) பிரிவு

மாவட்டம் : கிருஷ்ணகிரி

வட்டம் : கிருஷ்ணகிரி

வருவாய் கிராமம் : கொத்தபேட்டா

பட்டா எண் : 1515

உரிமையாளர்கள் பெயர்

1. D மதியழகன்

மகள்

A M சிவானி



புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புரைகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	
78	1A	2 - 0.0	2.76	--	--	--	--	2017/0103/31/031530- --- 23-04-2017
		2 - 0.00	2.76					

குறிப்பு 2 :



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 31/05/072/01515/20202 என்ற குறிப்பு எண்ணை உள்ளிடு செய்து உறுதி செய்துகொள்ளவும்.
- இத் தகவல்கள் 08-11-2022 அன்று 01:12:44 PM நேரத்தில் அச்சடிக்கப்பட்டது.
- கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்



தமிழக அரசு

வருவாய்த் துறை

நில உரிமை விபரங்கள் : இ. எண் 10(1) பிரிவு

மாவட்டம் : கிருஷ்ணகிரி

வட்டம் : கிருஷ்ணகிரி

வருவாய் கிராமம் : கொத்தபேட்டா

பட்டா எண் : 1521

உரிமையாளர்கள் பெயர்

1. D மதியழகன்

மனைவி

K M விஜயா



புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புரைகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	
78	1B	11 - 92.00	16.45	--	--	--	--	2017/0103/31/031672- --- 23-04-2017
81	1	1 - 9.00	1.51	--	--	--	--	2017/0103/31/031672- --- 23-04-2017
86	2	2 - 0.0	2.74	--	--	--	--	2017/0103/31/031672- --- 23-04-2017
		15 - 1.00	20.70					

குறிப்பு 2 :



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 31/05/072/01521/20269 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
- இத் தகவல்கள் 08-11-2022 அன்று 01:15:48 PM நேரத்தில் அச்சடிக்கப்பட்டது.
- கைப்பேசி கேமராவின் 2D barcode பாடிப்பான் மூலம் பாடித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

1431 ஆம் பதவியில் **திருக்கோட்டி** மாவட்டம் **திருக்கோட்டி** வட்டம் 720 நாடுகளில்

செய்தியின் விவரம்					சாதுகாப்பாளர் பெயர்	முதல் பட்டியல்					
1) பி. அலுவலர் பெயர்	2) பி. அலுவலர் பதவி	3) பி. அலுவலர் பதவி	4) பி. அலுவலர் பதவி	5) பி. அலுவலர் பதவி		6) செய்தியின் விவரம்	7) செய்தியின் விவரம்	8) செய்தியின் விவரம்	9) செய்தியின் விவரம்	10) செய்தியின் விவரம்	11) செய்தியின் விவரம்
78	IA	2-7	2-7	2-7							

2022
சுமதி
 Village Administrative Officer
 S. KOTTA BETTA
 KRISHNAGIRI TC & DT

பக்கம் 2
 கிராமத்தில் எழுதவாரி புலவாரி வைப்பிற்கு சான்று அளிக்கக் கண்காணக

இரண்டாம் பட்டியல்					சாதுகாப்பாளர் பெயர்	சாதுகாப்பாளர் பதவி	சாதுகாப்பாளர் பதவி	சாதுகாப்பாளர் பதவி	சாதுகாப்பாளர் பதவி
13) செய்தியின் விவரம்	14) செய்தியின் விவரம்	15) செய்தியின் விவரம்	16) செய்தியின் விவரம்	17) செய்தியின் விவரம்					

சுமதி
சுமதி
சுமதி



78/1A-46 8.4 6 1.38 2.20.0 2.76 870
 78-46 8.4 6 1.38 11.92.0 16.45 121
 13.92.0 14.21
 5.4 8.4 6 1.38 5.77.0 7.98 153
 9.45.0 13.04

3.4 8.4 6 1.38 3.68.0 5.06 162
 9.45.0 13.04
 (Sd) P. S. Srinivasan

As per 8A/94/99 dt 29.11.89

3A2B1 2.4 8.3 4 200 1.13.0 3.13
 3A2B2 0.02.0 0.06 187 S.P. ...
 3A2B3 0.02.5 0.06 188 ...
 3A2B4 0.02.0 0.06 189 A. ...
 3A2B5 0.02.0 0.06 190 A. ...
 3A2B6 0.02.0 0.06 191 A.S. ...
 3A2B7 0.00.5 0.06 192 A. ...
 1.24.0 3.49

6A1A1 2.4 8.3 4 200 1.09.5 3.03
 6A1A2 2.4 8.3 4 200 1.02.5 2.83
 0.01.5 0.06 192 A. ...
 1035 2.89

Village Administrative Officer
 78, KOTHA PETTA
 KRISHNAGIRI TK. S. DT

(Sd) P. S. Srinivasan
 26/11/2022

n. n. m. 124. Kotha Petta.

	2	3	4	5	6	7	8	9	10	11	
1	81-1	r	4		8-4	6	1	38	13 92.0	19 21	153 K. S. ...
2	-2	r	4		8-4	6	1	38	0 69.0	0 95	153 K. S. ...
3	-3	r	4		8-4	6	1	38	1 38.0	1 91	153 K. S. ...
4	-4	r	4		8-4	6	1	38	0 26.5	0 37	153 K. S. ...
5	-5	r	4		8-4	6	1	38	0 22.0	0 30	153 K. S. ...
									16 48.0	22 67	
75	r	4			8-4	6	1	38	9 45.0	13 04	153 K. S. ...
80	r	4							0 41.0		
81-1	r	4			8-4	6	1	38	1 07.0	1 51	4 ...
82	r	4			8-4	6	1	38	1 74.0	2 39	97 M. ...
83	r	4			8-4	6	1	38	1 62.0	2 24	16 ...
84	r	4							4 41.0	6 14	
82	r	4							0 56.5		
83	r	4							0 90.0		
84	r	4							0 31.5		




Village Administrative Officer
 78, KOTHA PETTA
 KRISHNAGIRI TK. S. DT

15/02/2023

Samithiam In Government/Checklist/Item

78	1B	-2	P	பய்துவளி	புறமா	8-4	6	1	38	11	42.00	16	45	சுற்றுமுகம் புறமா	
78	2	-2	P	பய்துவளி	புறமா	8-4	6	1	38	0	0.00	0	91	151-200 புறமா தொடர் தொடர் முடி 1 ப புறமா	
78	3	-3	P	பய்துவளி	புறமா	8-4	6	1	38	1	38.50	1	91	151-200 புறமா தொடர் தொடர் முடி 1 ப புறமா	
78	4	-4	P	பய்துவளி	புறமா	8-4	6	1	38	0	26.50	0	17	151-200 புறமா தொடர் தொடர் முடி 1 ப புறமா	
78	5	-5	P	பய்துவளி	புறமா	8-4	6	1	38	0	22.00	0	50	151-200 புறமா தொடர் தொடர் முடி 1 ப புறமா	
TOTAL FOR SURVEY NUMBER - 78											15	48.00	22	74	
79	1A	-1	P	பய்துவளி	புறமா	8-4	6	1	38		3-80.50	5	26	370-400 புறமா புறமா புறமா	
79	1B	-1	P	பய்துவளி	புறமா	8-4	6	1	38		1-96.50	2	72	153-200 புறமா தொடர் தொடர் முடி 1 ப புறமா	

12

 Village Administrative Officer

S. DHANASEKAR, M.Sc.,
 Qualified Person





படிவம் - 10

[விதி 9(அ) காண்க]

தொழில் கூட்டுப்பதிவு அறிவிப்பு

கிருஷ்ணகிரி தொழில் நிறுவனப் பதிவாளர், 1932ஆம் ஆண்டு இந்தியக் கூட்டு வாணிபச் சட்டம், 58(1) பிரிவில் குறிப்பிட்டிருக்கும் அறிக்கை வரப்பெற்றுக் கொண்டதை இதனால் அறிவித்துக்கொள்கிறார். அந்த அறிக்கை கோப்பில் சேர்க்கப்பட்டு தொழில் நிறுவனத்தின் பெயரான

SRI DEVARAJAA "M" SAND

தொழில் நிறுவனப் பதிவேட்டில் 2017-ஆம் ஆண்டு 243-ஆம் எண்ணாகப் பதிவாகியிருக்கிறது.

2017-ஆம் ஆண்டு மே திங்கள்-30-ஆம் நாள்



தொழில் கூட்டுப்பதிவாளர்
மற்றும்
மாவட்டப்பதிவாளர்
கிருஷ்ணகிரி.


S. DHANASEKAR, M.Sc., (Gao)
Qualified Person

भारतीय गैर न्यायिक

एक सौ रुपये
₹. 100



RS

100
27 JAN 2023



HUNDRED

भारत INDIA

INDIA NON JUDICIAL



தமிழ்நாடு TAMILNADU

D. Mathiazhagan
Krishnagiri

Place/ 54 897399

D. N.
B. N. MUNIRAJ
S.V.Lc: 7353/83
Krishnagiri, Tamilnadu

34629
17.5.2017

AGDP
12/88

"PARTNERSHIP DEED OF "SRI DEVARAAJAA" M" SAND"

This deed of partnership is executed at Krishnagiri on this 17th day of May 2017 between;

1. Sri.D.Mathiazhagan, S/o.Sri.K.M.Devaraj, aged about 51 years, residing at No.58-B, Gandhi Nagar,Basheer Mohameed layout, Krishnagiri Post, Krishnagiri Taluk and District Pin.635 001 herein after called the party of the first part.
2. Smt.K.M.Vijaya W/o.Sri.D.Mathiazhagan, aged about 50 years, residing at No.58-B, Gandhi Nagar, Basheer Mohammed Layout, Krishnagiri Post, Krishnagiri Taluk and District Pin.635 001 herein after called the party of the second part.

(Handwritten signatures and names)

भारतीय गैर न्यायिक

एक सौ रुपये

Rs. 100 2023

₹ 100



HUNDRED



SECRET INDIA

INDIA NON JUDICIAL

தமிழ்நாடு தனியாக TAMILNADU

24630
17.5.2017

D. Mohanrajagan
Krishnagiri

BA 697400
D. N. MURUGAN
S.V.No: 7353/83
Krishnagiri, Tamilnadu

Whereas the parties have mutually agreed to carry on the business in partnership under the name and style of "SRI DEVARAAJAA" "M" SAND" with effect from 17th May 2017 and the parties hereby desires to have all the terms and conditions of the partnership reduced to in writing and to have the same duly evidenced by this deed of partnership.

NOW THIS DEED WITNESSETH AS FOLLOWS:

1. Name and Style:

The name and style of the firm shall be "SRI DEVARAAJAA" "M" SAND"

[Handwritten signatures and dates]
17.5.2017

भारतीय गैर न्यायिक

एक सौ रुपये

Rs. 100

₹ 100



ONE HUNDRED RUPEES

भारत INDIA

INDIA NON JUDICIAL



கிருஷ்ணகிரி TAMILNADU

24631
17.5.2017

D. No. 58B
Krishnagiri

Proq

BA 697501

B.N. MUNIKHAJ
S.V.No: 7353/83
Krishnagiri Tamilnadu

2. Constitution of the firm:

The partnership firm as constituted under the deed of partnership shall carry on its business in partnership, as per the terms and conditions set out as below in this deed.

3. Place of Business:

The firm shall continue to have its principal place of business at D.No:58B,Gandhi Nagar, Basheer Mohammed Layout, Krishnagiri, Pin-635 001, and the same may be shifted to any other place as the partners may decide from time to time. And also by mutual consent of the partners, the firm can open branches for its business activities as decided by the partners from time to time.

[Handwritten signature]

[Handwritten signature]
Before me
[Signature]

[Handwritten signature]



4. Nature of Business:

The firm shall carry on the business as Manufacturers, Processors, Dealers, Importers, Exporters, Merchants, Commission Agents, of "M" Sand, Blue Metals, Granite Product and such other activities as mutually agreed by the partners of the firm from time to time for the benefit of the firm.

5. Capital Contribution:

The total capital of the firm is Rs.10,00,000/- (Rupees Ten Lacs only) contributed by the partners as detailed below:

Sl no	Name	Capital in Rs.
1.	Sri.D.Mathiazhagan	5,00,000/-
2.	Smt.K.M.Vijaya	5,00,000/-
		<u>10,00,000</u>

The same may be increased or decreased as decided by the partners from time to time after considering the business requirements. The share of profit if any shall be credited to the partner's capital account and loss if any shall be carried forward under the head profit and loss account. The partners are entitled for an interest on capital and current accounts on the fund outstanding at the end of the month @ 1% per month, shall be charged each month or such other rate of interest as agreed by the partners from time to time for the benefit of the firm and the same shall be credited in the partners capital account.

6. Loans and Borrowings:

The firm can borrow the required amount over and above the capital contribution by the partners from financial Institutions, Banks, partners and from such other sources at the rate and condition as decided by the partners from time to time. The loan documents have to be signed by the party of the first part on behalf of the firm.

7. Management of the firm:

The party of the First part Sri.D.Mathiazhagan shall be the managing partner of the firm and the Managing partner will manage the day to day affairs of the firm. Any one partner has to represent on behalf of the firm to Government departments, taxation matters etc on behalf of the firm. All the partners of the firm will manage the overall business activities.

[Handwritten signatures of Sri.D.Mathiazhagan and Smt.K.M.Vijaya]



For the above services rendered to the firm, the partners are eligible for remuneration and the eligible salary and remuneration to the partners shall be calculated and shall not exceed the limit prescribed u/s.40 (b) of the Income-tax act.1961, which is detailed below:

S.No.	Income	Claim able Remuneration
1.	On the first Rs.3, 00,000 of the book Profit-profit, or incase of a loss	Rs.1, 50,000 or at the rate of 90 of the book-profit whichever is More.
2.	on the balance of the book-profit	at the rate of 60 percent

The remuneration to the partners has to be shared by the partners in the following ratio after reducing the salary paid to the partners:

Sl.No.	Name	% of share
1.	Sri. D.Mathiazhagan	50%
2.	Smt.K.M.Vijaya,	50%

8. Accounts and Profit and Loss sharing ratio equally:

Proper books of accounts shall be maintained in the usual course of business and the same shall be closed on 31st March in each year to ascertain the net profit or loss of the firm for that year. The interest and remuneration payable to the partners and the taxes due and payable on the taxable income of the firm for the year shall be treated as common item of expenditure. Balance Sheet shall be prepared as on 31st March every year and the net profit or loss of the firm so arrived at shall be divided between the partners and the share be credited or debited as the case may be in the respective current accounts of such partners in the following sharing ratio.

Sl.No.	Name	% of share
1.	Sri. D.Mathiazhagan	50%
2.	Smt.K.M.Vijaya	50%

9. Duration of the Firm:

The duration of the firm will be at will. On death, retirement expulsion or admission of the partners shall not have the effect of dissolution of the firm.

[Handwritten signature]

[Handwritten signature]

3
B. Anand
2-10-2023



10. ADMISSION, RETIREMENT, EXPULSION OF PARTNERS AND DISSOLUTION OF THE FIRM:

- a) Admission: No new partner shall be admitted to the firm except with the written consent of all the partners. However in the case of a nominee of a deceased partner the other partner shall be bound to admit such nominee as a partner of the firm, in the manner mentioned therein.
- b) Retirement: Any partner, desiring to retire from the firm shall do so by giving a month's notice in writing to the other partners.
- c) Dissolution: Death, Retirement or expulsion of a partner shall not have the effect of dissolving the firm. In particular, no partner has the right to demand dissolution of the firm.

11. SETTLEMENT OF ACCOUNTS:

In the event of admission and retirement of partners and the dissolution of the firm for the purpose of settlement of rights and accounts between the partners, all the fixed assets of the business shall be re-valued taking into account the life of such assets, the prevailing market prices for the same and all other relevant factors. Provision for bad and doubtful debts shall also be made. Any surplus or deficit arising out of the aforesaid exercises shall be divided in proportion to the profit sharing ratio and credited or debited as the case may be, to the respective current accounts of partner.

12. Any partner shall have the right to nominate in writing any other individual, being related to him or her, as a spouse, son or daughter, to succeed such partner in the firm, in the event of death of such partner and the other partners shall admit such nominee as a partner to succeed to the firm for partnership interest of such deceased partners.

13. Bank Operation:

The bank accounts shall be opened in the firm name and operated in any Scheduled banks and such bank account shall be operated by any one of the partner signing the banking documents and instruments on behalf of the firm individually for the benefit of the firm.

[Handwritten signature]

[Handwritten signature]

Belgaur 02/12/23
[Handwritten signature]
12/12/23



14. ARBITRATION:

All matters in difference in relation to the partnership affairs shall be referred to arbitration to be appointed by each partner and their umpires or to single arbitrator according to the provisions of the Arbitration Act in force in India.

15. APPLICATION OF INDIAN PARTNERSHIP ACT.1932:

Except Provision mentioned above in this deed to the contrary, all the other provisions of the Indian Partnership Act.1932 shall be applicable to the firm.

In witness, the parties hereto affix their signatures to this deed on the day, month and year, herein above first mentioned.

WITNESS ::

1. *[Signature]* C.V. Venkatasamy,
S/o M. Vedicappa Sanyal
15/20 Krishnasamy Street
KRISHNASAMY

[Signature]

2. H. Senthil
(M. SATHIVEL)
No. 12/21, Street of
Kishoregani

2. *[Signature]*

Signed in this before me at
Krishnasamy on 17-05-2017.
[Signature]

NOTARIAL

NOTARIAL

[Signature]
S. DHANASEKAR, M.Sc., (Geo)
Qualified Person



தமிழ்நாடு தமில்நாடு TAMILNADU

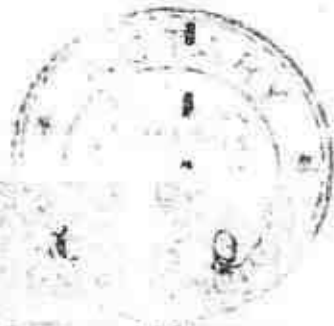
38511 SRI DEVARAJA M SAND
KRISHNAGIRI
27.9.2017

100 / AH 851463
B.N. MUNIRAJ
S.V.Lc: 7353/83
Krishnagiri, Tamilnadu

"PARTNERSHIP DEED OF "SRI DEVARAJA M SAND"

This deed of partnership is executed at Krishnagiri on this 27th day of September 2017 between;

1. Sri.D.Mathiazhagan, S/o.Sri.K.M.Devaraj, aged about 51 years, residing at No.58-B, Gandhi Nagar,Basheer Mohameed layout, Krishnagiri Post, Krishnagiri Taluk and District Pin.635 001 herein after called the party of the first part.
2. Smt.K.M.Vijaya W/o.Sri.D.Mathiazhagan, aged about 50 years, residing at No.58-B, Gandhi Nagar, Basheer Mohammed Layout, Krishnagiri Post, Krishnagiri Taluk and District Pin.635 001 herein after called the party of the second part.
3. Selvi.A.M.Shivani D/o.Sri.D.Mathiazhagan, aged about 20 years, residing at No.58-B, Gandhi Nagar, Basheer Mohammed Layout, Krishnagiri Post, Krishnagiri Taluk and District Pin.635 001 herein after called the party of the Third part.



NOTARIAL NOTARIAL

Handwritten signatures and names:
Sri.D.Mathiazhagan
Smt.K.M.Vijaya
Selvi.A.M.Shivani



தமிழ்நாடு தமில்நாடு TAMILNADU

35512 SRI DEVARAJAN "M" SAND
27.9.2017 K. R. SHIVANI

₹100/ AH 851464
B.N. MUNIRAJ
S.V.Lc: 7353/83
Krishnagiri, Tamilnadu

Whereas the party of the First part and Second part contributed the partners firm under the name and style of "SRI DEVARAJAN "M" SAND" from 17.05.2017 onwards. Now the party of the third part selvi.A.M.Shivani has willing to join as partner of the firm with effect from 27.09.2017. Hence the parties herein desire to admit her as partner of the firm and to have all the terms and conditions of the partnership reduced to in writing and to have the same duly evidenced by this deed of partnership.

(Handwritten signatures)
S. Shivani





தமிழ்நாடு தமிழ்நாடு TAMILNADU

38513 SRI DEVARAJA M SAND
KRISHNAGIRI

27.9.2017

6100/ AH 851465
B.N. MUNIRAK
S.V.Lc: 7353/83
Krishnagiri, Tamilnadu

NOW THIS DEED WITNESSETH AS FOLLOWS:

1. Name and Style:

The name and style of the firm shall be **"SRI DEVARAJA M SAND"**

2. Constitution of the firm:

The partnership firm as constituted under the deed of partnership shall carry on its business in partnership, as per the terms and conditions set out as below in this deed.

3. Place of Business:

The firm shall continue to have its principal place of business at D.No-58B, Gandhi Nagar, Basheer Mohammed Layout, Krishnagiri, Pin-635 001, and the same may be shifted to any other place as the partners may decide from time to time. And also by mutual consent of the partners, the firm can open branches for its business activities as decided by the partners from time to time.



3
சுற்றுலா மற்றும்
பொருளாதார அமைச்சு
தமிழ்நாடு
கி. 100 ரூபாய்
2023

[Handwritten signatures]
Shuairi .H.A

4. Nature of Business:

The firm shall carry on the business as Manufacturers, Traders, Processors, Dealers, Importers, Exporters, Merchants, Consultants, Commission Agents, of "M"Sand, Blue Metals, Granite Product and such other activities as mutually agreed by the partners of the firm from time to time for the benefit of the firm.



5. Capital Contribution:

The total capital of the firm is Ru.11,00,000/- (Rupees Eleven Lacs only) contributed by the partners as detailed below:

Sl.no	Name	Capital in Ru.
1.	Sri.D.Mathiazhagan	5,00,000/-
2.	Smt.K.M.Vijaya	5,00,000/-
3.	Selvi.A.M.Shivani	1,00,000/-
		<hr/>
		11,00,000

The same may be increased or decreased as decided by the partners from time to time after considering the business requirements. The share of profit if any shall be credited to the partner's capital account and loss if any shall be carried forward under the head profit and loss account. The partners are entitled for an interest on capital and current accounts on the fund outstanding at the end of the month @ 1% per month, shall be charged each month or such other rate of interest as agreed by the partners from time to time for the benefit of the firm and the same shall be credited in the partners capital account.

6. Loans and Borrowings:

The firm can borrow the required amount over and above the capital contribution by the partners from financial Institutions, Banks, partners and from such other sources at the rate and condition as decided by the partners from time to time. The loan documents have to be signed by the party of the first part on behalf of the firm.

7. Management of the firm:

The party of the First part Sri.D.Mathiazhagan shall be the managing partner of the firm and the Managing partner will manage the day to day affairs of the firm. Any one partner has to represent on behalf of the firm to Government departments, taxation matters etc on behalf of the firm. All the partners of the firm will manage the overall business activities.

For the above services rendered to the firm, the partners are eligible for remuneration and the eligible salary and remuneration to the partners shall be calculated and shall not exceed the limit prescribed u/s-40 (b) of the Income-tax act.1961, which is detailed below:

[Handwritten signatures and notes]

4
Sri.D.Mathiazhagan
Smt.K.M.Vijaya
Selvi.A.M.Shivani

S.No.	Income	Claim able Remuneration
1.	On the first Rs.3, 00,000 of the book Profit -profit, or incase of a loss	Rs.1, 50,000 or at the rate of 90% of the book-profit whichever is More.
2.	On the balance of the book-profit	at the rate of 60 percent



The remuneration to the partners has to be shared by the partners in the following ratio after reducing the salary paid to the partners:

Sl.No.	Name	% of share
1.	Sri. D.Mathiazhagan	60%
2.	Smt.K.M.Vijaya	30%
3.	Selvi.A.M.Shivani	10%

8. Accounts and Profit and Loss sharing ratio equally:

Proper books of accounts shall be maintained in the usual course of business and the same shall be closed on 31st March in each year to ascertain the net profit or loss of the firm for that year. The interest and remuneration payable to the partners and the taxes due and payable on the taxable income of the firm for the year shall be treated as common item of expenditure. Balance Sheet shall be prepared as on 31st March every year and the net profit or loss of the firm so arrived at shall be divided between the partners and the share be credited or debited as the case may be in the respective current accounts of such partners in the following sharing ratio.

Sl.No.	Name	% of share
1.	Sri. D.Mathiazhagan	60%
2.	Smt.K.M.Vijaya	30%
3.	Selvi.A.M.Shivani	10%

9. Duration of the Firm:

The duration of the firm will be at will. On death, retirement expulsion or admission of the partners shall not have the effect of dissolution of the firm.

10. ADMISSION, RETIREMENT, EXPULSION OF PARTNERS AND DISSOLUTION OF THE FIRM:

- Admission:** No new partner shall be admitted to the firm except with the written consent of all the partners. However in the case of a nominee of a deceased partner the other partner shall be bound to admit such nominee as a partner of the firm, in the manner mentioned therein.
- Retirement:** Any partner, desiring to retire from the firm shall do so by giving a month's notice in writing to the other partners.
- Dissolution:** Death, Retirement or expulsion of a partner shall not have the effect of dissolving the firm. In particular, no partner has the right to demand dissolution of the firm.

5



[Handwritten signature]
 N. MATHIAZHAGAN & CO.
 CHARTERED ACCOUNTANTS
 10, SRI LAKSHMI NAGAR, CHENNAI - 600 029

[Handwritten signature]
[Handwritten signature]
[Handwritten signature]

11. SETTLEMENT OF ACCOUNTS:

In the event of admission and retirement of partners and the dissolution of the firm for the purpose of settlement of rights and accounts between the partners, all the fixed assets of the business shall be re-valued taking into account the life of such assets, the prevailing market prices for the same and all other relevant factors. Provision for bad and doubtful debts shall also be made. Any surplus or deficit arising out of the aforesaid exercises shall be divided in proportion to the profit sharing ratio and credited or debited as the case may be, to the respective current accounts of partner.



12. Any partner shall have the right to nominate in writing any other individual, being related to him or her, as a spouse, son or daughter, to succeed such partner in the firm, in the event of death of such partner and the other partners shall admit such nominee as a partner to succeed to the firm for partnership interest of such deceased partners.

13. Bank Operation:

The bank accounts shall be opened in the firm name and operated in any Scheduled banks and such bank account shall be operated by any one of the partner signing the banking documents and instruments on behalf of the firm individually for the benefit of the firm.

14. ARBITRATION:



All matters in difference in relation to the partnership affairs shall be referred to arbitration to be appointed by each partner and their umpires or to single arbitrator according to the provisions of the Arbitration Act in force in India.

15. APPLICATION OF INDIAN PARTNERSHIP ACT, 1932:

Except Provision mentioned above in this deed to the contrary, all the other provisions of the Indian Partnership Act, 1932 shall be applicable to the firm.

In witness, the parties hereto affix their signatures to this deed on the day, month and year, herein above first mentioned.

WITNESS :-

- 1. 
R. Arumugam 31a Gounderling
31/26, Gounderling, Madhavaram
- 2. 
M. Arumugam
15/20, Gounderling, Madhavaram

- 1. 
- 2. 
- 3. 

6. Signed in this deed on the 15th day of November 2023.




S. DHANASEKAR, M.Sc., (Geo)
Qualified Person



இந்திய அரசாங்கம்

Government of India



இந்திய அடையாள அமைப்பு ஆணையர் அமைப்பு

Unique Identification Authority of India

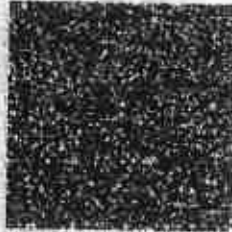
பதிவேட்டு எண்/ Enrolment No.: 2043/99107/01530

Download Date: 20/01/2018

To
D.Mathiazhagan
S/O: D.Devaraj Gounder
D NO 58B
GANDHI NAGAR
KRISHNAGIRI
BASHEER MOHAMMED LAYOUT
Krishnagiri
Krishnagiri
Krishnagiri Tamil Nadu - 635001
9842744190

Issue Date: 20/01/2018

Signature valid



உங்கள் ஆதார் எண் / Your Aadhaar No. :

5708 3886 4282

VID : 9145 8895 2832 2614

எனது ஆதார், எனது அடையாளம்



Government of India



Download Date: 20/01/2018



D.Mathiazhagan
பிறந்த நாள்/DOB: 25/05/1966
ஆண் / MALE

Issue Date: 20/01/2018

5708 3886 4282

VID : 9145 8895 2832 2614

எனது ஆதார், எனது அடையாளம்



Governors of India



தகவல்

- ஆதார் அடையாளத்திற்கான சான்று குடியறிமைக்கு அல்ல,
- பாதுகாப்பான OR குறியீடு ஆய்வின் XML / ஆய்வின் அங்கீகரிக்கப்பட்ட பயன்படுத்தி அடையாளத்தை சரிபார்க்கவும்
- இது எலக்ட்ரானிக் செயல்முறை மூலம் தயாரிக்கப்பட்ட கடிதமாகும்.

INFORMATION

- Aadhaar is a proof of identity, not of citizenship.
- Verify identity using Secure QR Code/ Offline XML/ Online Authentication.
- This is electronically generated letter.

- ஆதார் நாடு முழுவதிலும் செல்லுபடியாகும்.
- பல்வேறு அரசு மற்றும் அரசு சாரா சேவைகளை எளிதில் பெற ஆதார் உதவுகிறது.
- உங்கள் மொபைல் எண் மற்றும் மின்னஞ்சல் முகவரி ஆதாரில் புதுப்பிக்கவும்
- mAadhaar செயலியைப் பயன்படுத்தி உங்கள் ஸ்மார்ட் போனில் ஆதாரை எடுத்துச் செல்லுங்கள்

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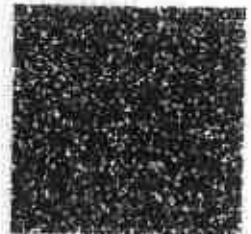


Unique Identification Authority of India



முதுவரி:
தலை: குமாரசாறு கவுண்டர், கடை 58 B,
காந்தி நகர், பம்மா முகாமு மேசை,
கிருஷ்ணகிரி, கிருஷ்ணகிரி, கிருஷ்ணகிரி,
தமிழ் நாடு - 635001

Address:
S/O: D.Devaraj Gounder, D NO 58B,
GANDHI NAGAR, BASHEER MOHAMMED
LAYOUT, KRISHNAGIRI, Krishnagiri,
Krishnagiri,
Tamil Nadu - 635001



5708 3886 4282

VID : 9145 8895 2832 2614

1947 | help@uidai.gov.in | www.uidai.gov.in

S.DHANASEKAR, M.Sc.,(Geo)
Qualified Person

From
Thiru L.Suresh,M.Sc.,
Deputy Director,
Geology and Mining,
Krishnagiri.

To
M.s. Devaraajaa M.Sand
No.58 B Gandhi Nagar,
Krishnagiri Town and District.
Pin-635001



Lr.No. 418/2017/Mines

dated: .12.2017

Sir,

Sub: Mines and Minerals - Krishnagiri District and Taluk - Kothapetta village - S.F.No.78/1A(P) and 78/1B(P)- Over an extent of 4.00.0 Hects of patta lands - Quarry Lease for Rough Stone Application preferred by Thiru. M.s. Devaraajaa M.Sand - Precise Area given - Draft Mining Plan submitted - Mining Plan approved - reg.

Ref: 1.The Commissioner of Geology and Mining i/c, Chennai - 32 letter Rc.No.3868/LC/2012 dated 19.11.2012
2.District Collector, Krishnagiri Lr.No.418/2017 Mines-1 dated 02.12.2017
3. Thiru. M.s. Devaraajaa M.Sand No.58 B Gandhi Nagar, Krishnagiri Town and District Letter. Dated: Nil received on 29.12.2017

In the reference 2nd cited M/s.Devaraajaa M.Sand, No.58 B Gandhi Nagar,Krishnagiri Town and District. Pin-63500 I have been issued precise area over an extent of 4.00.0 hecets. in patta land in S.F.No.78/1A(P) and 78/1B(P) of Kothapetta village, Krishnagiri Taluk, and District for the proposed grant of rough stone quarry lease for a period of 5 years under the provisions of Rule 19(1) and 20 of Tamil Nadu Minor Mineral Concession Rules, 1959 and had been directed to submit approved mining plan and Environment Clearance.

2. In this regard, in the reference 3rd cited M/s.Devaraajaa M.Sand, No.58 B Gandhi Nagar,Krishnagiri Town and District. Pin-63500 had submitted 03 copies of draft Mining Plan for approval for the said quarry lease.

3. The Draft Mining Plan submitted by M/s.Devaraajaa M.Sand has been scrutinized as per the guide lines/ Instructions issued by the Commissioner of Geology and Mining, Chennai-32 in the reference first cited. The mining plan is prepared in accordance with the guidelines / instructions issued and tallies with the field conditions. The special conditions imposed in the precise area letter had been incorporated in the Mining Plan.

4. The details of quarries situated within 500 mts radial distance from the proposed area is as follows:

iii) That the mining plan is approved without prejudice to any other order or directions from any court of competent jurisdiction.

iv) The following special conditions imposed in the District Collector, Krishnagiri letter in Roc.No.412/2017/Mines dated 11.12.2017 should be adhered without any deviation while quarrying.

- a) A safety zone of 7.5 mts. should be left out for the adjoining patta lands.
- b) A safety zone of 10 mts should be left out for the Government land S.F.No.56/1 situated on the south west of the applied area.
- c) At any cost no quarrying should be carried out in the adjacent Government land and no hindrance should be given to the public.

6. The applicant should get prior clearance from the District level Environment Impact Assessment Authority, Krishnagiri District and should submit it to the District Collector, Krishnagiri.

Deputy Director
Geology and Mining,
Krishnagiri.

Copy submitted to

1. The Chairman, Krishnagiri District Level Environment Impact Assessment Authority, Collectorate, Krishnagiri
2. The Commissioner of Geology and Mining, Guindy, Chennai -32.

S. DHANASEKAR, M.Sc. (Geo)
Qualified Person

Reg. No 01BBB1005

Col Code 106 / 106



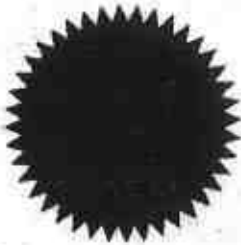
அறிவியல் புலம்

FACULTY OF SCIENCE

பெரியார் பல்கலைக்கழக ஆட்சிக்குழு 2003 ஆம் ஆண்டு ஏப்ரல் மாதம் நடந்த பயன்பாட்டு புவியமைப்பியல் தேர்வில் S தனசேகர் என்பவர் முதல் வகுப்பில் தேர்ச்சி பெற்றார் என்று தக்க தேர்வாளர்கள் சான்றளித்தபடி அறிவியல் நிறைஞர் என்னும் பட்டத்தை அவருக்குப் பல்கலைக்கழக இலச்சினையுடன் வழங்குகிறது.

The Syndicate of the Periyar University hereby makes known that **DHANASEKAR S** *has been admitted to the* **DEGREE OF MASTER OF SCIENCE in APPLIED GEOLOGY**

he/she having been certified by duly appointed Examiners to be qualified to receive the same and was placed in the **FIRST CLASS** *at the Examination held in* **APRIL 2003**



Given under the seal of this University

நாள்

Dated 15-09-2004

சேலம் 636011, தமிழ்நாடு, இந்தியா.
Salem 636011, TamilNadu, India.

A handwritten signature in black ink.
பதிவாளர்
Registrar

A handwritten signature in black ink.
துணைவேந்தர்
Vice-Chancellor

A handwritten signature in black ink.
S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

PRITHVI MINERALS,VARANALLAMPALAYAM,
ALATHUR POST - 637 303.
SANKARI Tk, Salem Dt. Tamil Nadu

Date :27.12.08.

TO WHOMSOEVER IT MAY CONCERN

This is to certify that SHRI S. DHANASEKAR, S/o. Shri A. Sundaram residing at No.8/3, Kullappan Street, Omalur Taluk, Salem District - 636 455 is working in our mines for the date of 15.10.2003 to till date as Geologist. During the above tenure of service his execution of the assigned work is exemplary and worth mentioning. We wish him success in his future endeavours.

For PRITHVI MINERALS,


(T.P. THANGAVEL.)
Partner
S.DHANASEKAR, M.Sc.(Geo)
Qualified Person

PHOTO SHOWN EXISTING LEASE AREA VIEW-1



PHOTO SHOWN EXISTING LEASE AREA VIEW- 2




S.DHANASEKAR, M.Sc., (Geo)
Qualified Person

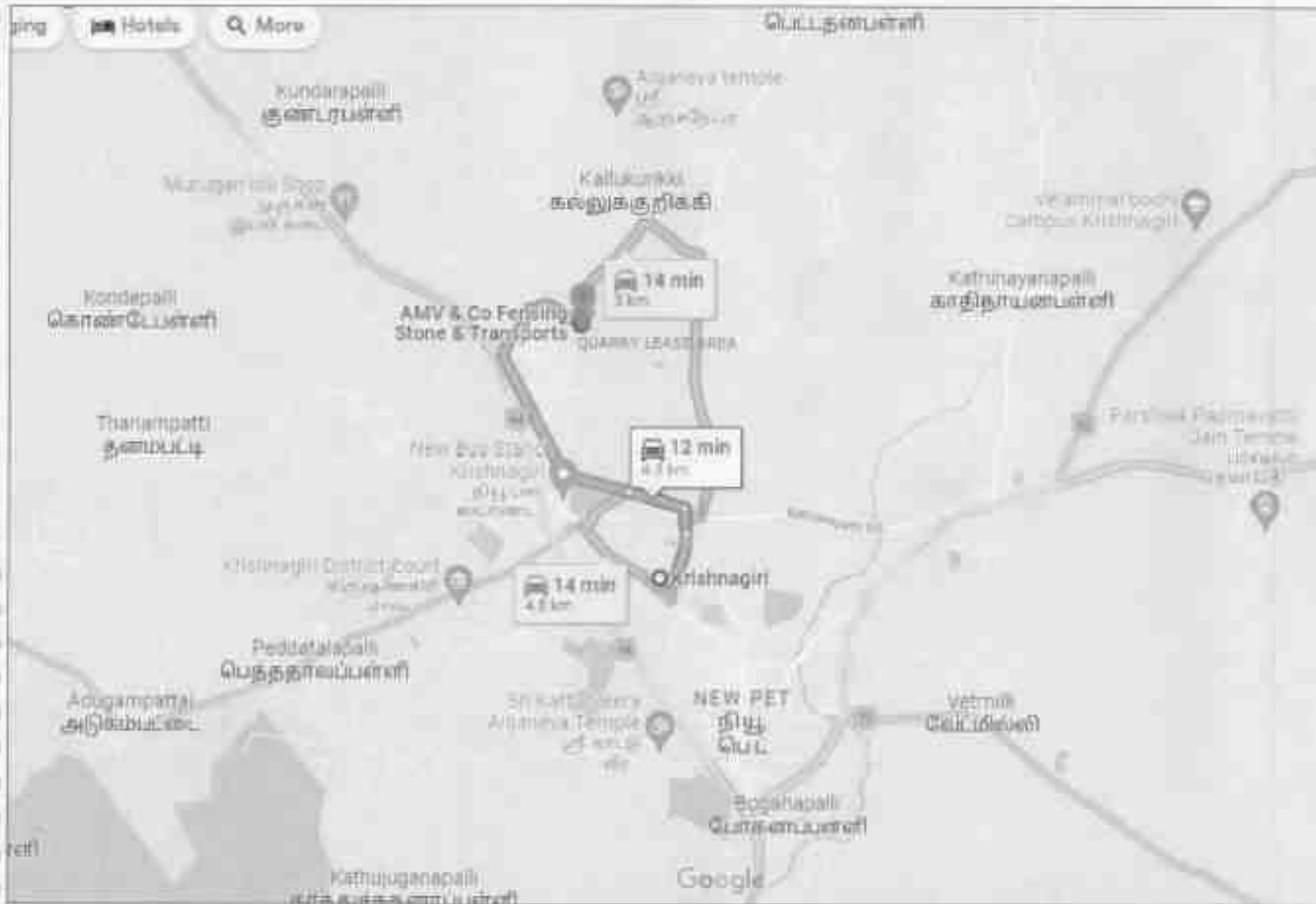


PLATE NO: 1A	
DATE OF SURVEY: 02-11-2022	
LESSEE ADDRESS:	
M/S SRI DEVARAJA 'H' SAND NO 588, GANDHI NAGAR, KRISHNAGIRI TOWN, KRISHNAGIRI DISTRICT- 635 001.	
LOCATION OF QUARRY:	
EXTENT	: 4.00.0 Ha.
S.F.NO	: 76/1A(P) & 26/1B(P).
VILLAGE	: KOTHAPETTA.
TALUK	: KRISHNAGIRI.
DISTRICT	: KRISHNAGIRI.
INDEX	
QUARRY LEASE AREA	
ROAD	
INDEX MAP	
NOT TO SCALE	
PREPARED BY:	
I AM HEREBY CERTIFY THAT THE PLATE HAS BEEN CORRECTLY MADE AND IS TRUE TO THE BEST OF MY KNOWLEDGE	
 SURVEYOR CHALDIYERKUR	



PLATE NO: IC
 DATE OF SURVEY: 02-11-2022

LESSEE ADDRESS:
 M/s.SRI DEVARAJA W SAND
 NO.588, GANDHI NAGAR,
 KRISHNAGIRI TOWN,
 KRISHNAGIRI DISTRICT- 635 001.

LOCATION OF QUARRY:
 EXTENT : 4.00.0 Hrs.
 S.F.NO : 78/1A(P) & 78/1B(P)
 VILLAGE : KOTHAPETTA,
 TALUK : KRISHNAGIRI,
 DISTRICT : KRISHNAGIRI.

INDEX
 QUARRY LEASE AREA

SATELLITE IMAGE
 LEASE AREA
 SCALE 1:1000

Point No	LATITUDE	LONGITUDE
1	12° 52' 48.0000" N	78° 12' 36.2881" E
2	12° 52' 48.8118" N	78° 12' 36.4888" E
3	12° 52' 48.9889" N	78° 12' 40.7687" E
4	12° 52' 50.0000" N	78° 12' 46.8000" E
5	12° 52' 50.2884" N	78° 12' 41.4081" E
6	12° 52' 48.0718" N	78° 12' 46.8287" E
7	12° 52' 48.4889" N	78° 12' 46.8542" E
8	12° 52' 44.5887" N	78° 12' 42.8888" E
9	12° 52' 45.0814" N	78° 12' 45.7887" E
10	12° 52' 48.4000" N	78° 12' 45.9888" E

PREPARED BY:
 SRI SURESH SURESH PRAKASH SRI SURESH
 SRI SURESH SURESH PRAKASH SRI SURESH
 SRI SURESH SURESH PRAKASH SRI SURESH

SRI SURESH SURESH PRAKASH SRI SURESH
 SRI SURESH SURESH PRAKASH SRI SURESH

12° 32' 50.0523" N
78° 12' 43.6128" E



12° 31' 46.6000" N
78° 12' 39.2801" E

12° 32' 49.8700" N
78° 12' 49.4269" E

12° 32' 45.4896" N
78° 12' 49.4142" E

168 A

PLATE NO. 10

DATE OF SURVEY: 02-11-2022

LESSEE ADDRESS:

M/S. SRI DEVARAJA 'M' SAND
NO. 565, GANDHI NAGAR,
KRISHNAGIRI TOWN,
KRISHNAGIRI DISTRICT - 635 001.

LOCATION OF QUARRY:

EXTENT : 4.00.0 Ha.
S.F. NO : 78/1A(F) & 78/1B(F).
VILLAGE : XOTHAPETTA,
TALUK : KRISHNAGIRI,
DISTRICT : KRISHNAGIRI.

INDEX

QUARRY LEASE BOUNDARY

500M RADIUS

300M RADIUS

SATELLITE IMAGE
(DOHC HAIHUS)

SCALE 1:5000

PREPARED BY:

120 168800 168800 168800 168800
168800 168800 168800 168800 168800
168800 168800 168800 168800 168800

SURVEYOR
OFFICE SURVEYOR



PLATE NO. 30

SITE OF QUARRY

LIBERTY ADDRESS

M/S. SRI DEVARAJAIA W. SARE
NO. 588, CHANDRANAGAL,
KODINHADE TOWNSHIP,
KODINHADE DISTRICT - 525 001

LOCATION OF QUARRY

EXTENT - 4.023 Ha.
S.F. NO. - 78/1(B) & 78/2(B)
VILLAGE - KODINHADE
TALEUK - KODINHADE
DISTRICT - KODINHADE

INDEX

- G.L. BOUNDARY
- ESM & CSJW
- SAFETY DISTANCE
- TEMPORARY BENCH MARK
- GRAVE
- STONE & SHY
- ROUGH STONE
- EXISTING PIT
- CONTOUR LINE
- QUARRY ROAD
- WELL
- SHAL

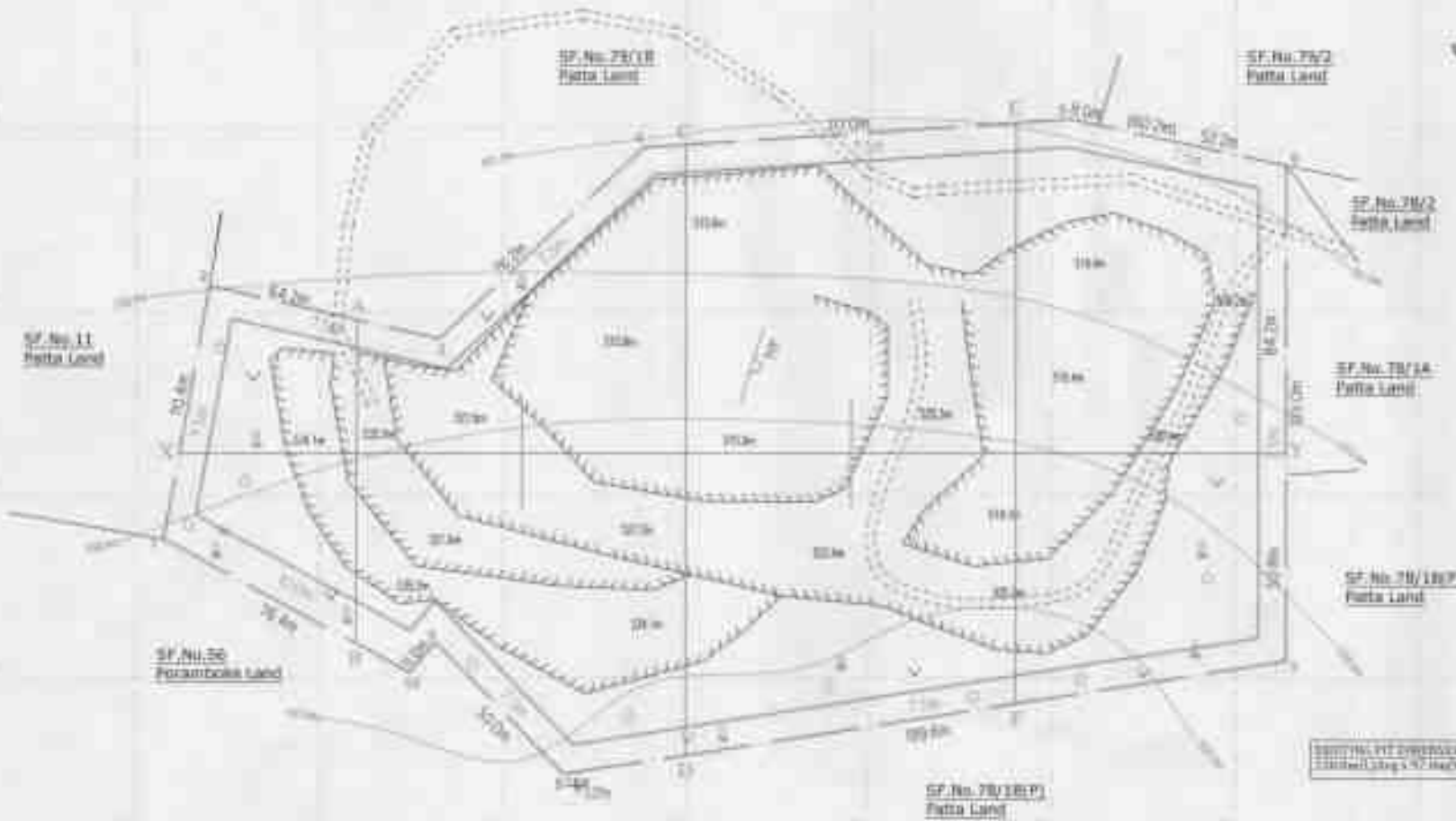
STREETS AND
CONTOUR PLAN

SCALE: 1 : 1000

PREPARED BY

Geological Survey of India, Bangalore
No. 588, Chandranagal, Kodinhal
Taluk, Kodinhal District - 525 001

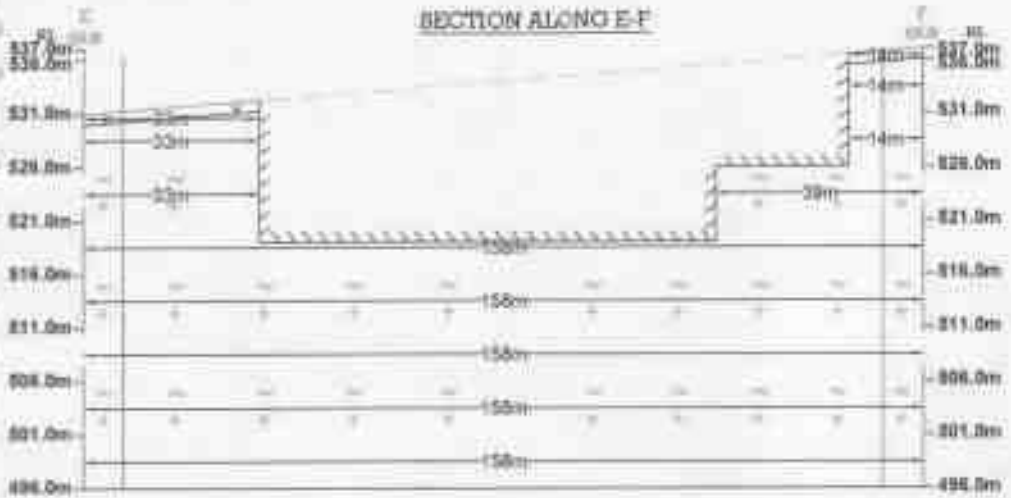
Surveyor



BOUNDING PIT EXPRESSION
(Refer to Map No. 78/1(B) & 78/2(B))



SECTION ALONG E-F



TOTAL DEPTH = 43m

GEOLOGICAL RESERVE								
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in M3	Geological Reserve in m3 @ 95%	Fine waste in m3 @ 5%	Gravel in m3
KY-AB	I	30	30	1				840
	II	45	41	5	9225	8764	461	
	III	62	88	5	27280	25916	1364	
	IV	93	88	5	40920	38874	2046	
	V	93	88	5	40920	38874	2046	
	VI	93	88	5	40920	38874	2046	
	VII	93	88	5	40920	38874	2046	
	VIII	93	88	5	40920	38874	2046	
	IX	93	88	5	40920	38874	2046	
TOTAL					282925	267924	14101	840
KY-CD	I	1	32	1				32
	II	1	49	5	245	233	12	
	III	1	57	5	285	271	14	
	IV	13	78	5	5070	4817	253	
	V	13	78	5	5070	4817	253	
	VI	90	166	5	74700	70965	3735	
	VII	90	166	5	74700	70965	3735	
	VIII	90	166	5	74700	70965	3735	
	IX	90	166	5	74700	70965	3735	
TOTAL					309470	293998	15472	32
KY-EP	I	21	47	1				147
	II	31	14	5	2170	2062	108	
	III	41	47	5	9635	9153	482	
	IV	41	72	5	14760	14022	738	
	V	116	158	5	91640	87058	4582	
	VI	119	158	5	94010	89310	4700	
	VII	119	158	5	94010	89310	4700	
	VIII	119	158	5	94010	89310	4700	
	IX	119	158	5	94010	89310	4700	
TOTAL					494245	469538	24710	1457
GRAND TOTAL					1083740	1031457	54283	2329

PLATE NO: III-B

DATE OF SURVEY: 02-11-2022

LESSEE ADDRESS:
 M/s.SRI DEVARAJIAA TR SAND NO.588, GANDHI NAGAR, KRISHNAGIRI TOWN, KRISHNAGIRI DISTRICT- 535 001.

LOCATION OF QUARRY:
 EXTENT : 4.00.0 Ha,
 S.F.NO : 7B/1A(P) & 7B/1B(P),
 VILLAGE : KOTHAPETTA,
 TALUK : KRISHNAGIRI,
 DISTRICT : KRISHNAGIRI.

INDEX

Q.L. BOUNDARY

7.5m & 10.0m SAFETY DISTANCE

GRAVEL

ROUGH STONE

EXISTING PIT

GEOLOGICAL SECTIONS

SCALE: HOR-1:1000
 VER-1:300

PREPARED BY:
 I DO HEREBY CERTIFY THAT THE PLATE AND DRAWINGS WERE PREPARED IN ACCORDANCE TO THE ACT BY MY SIGNATURE

SURVEYOR
 QUALITY CONTROL

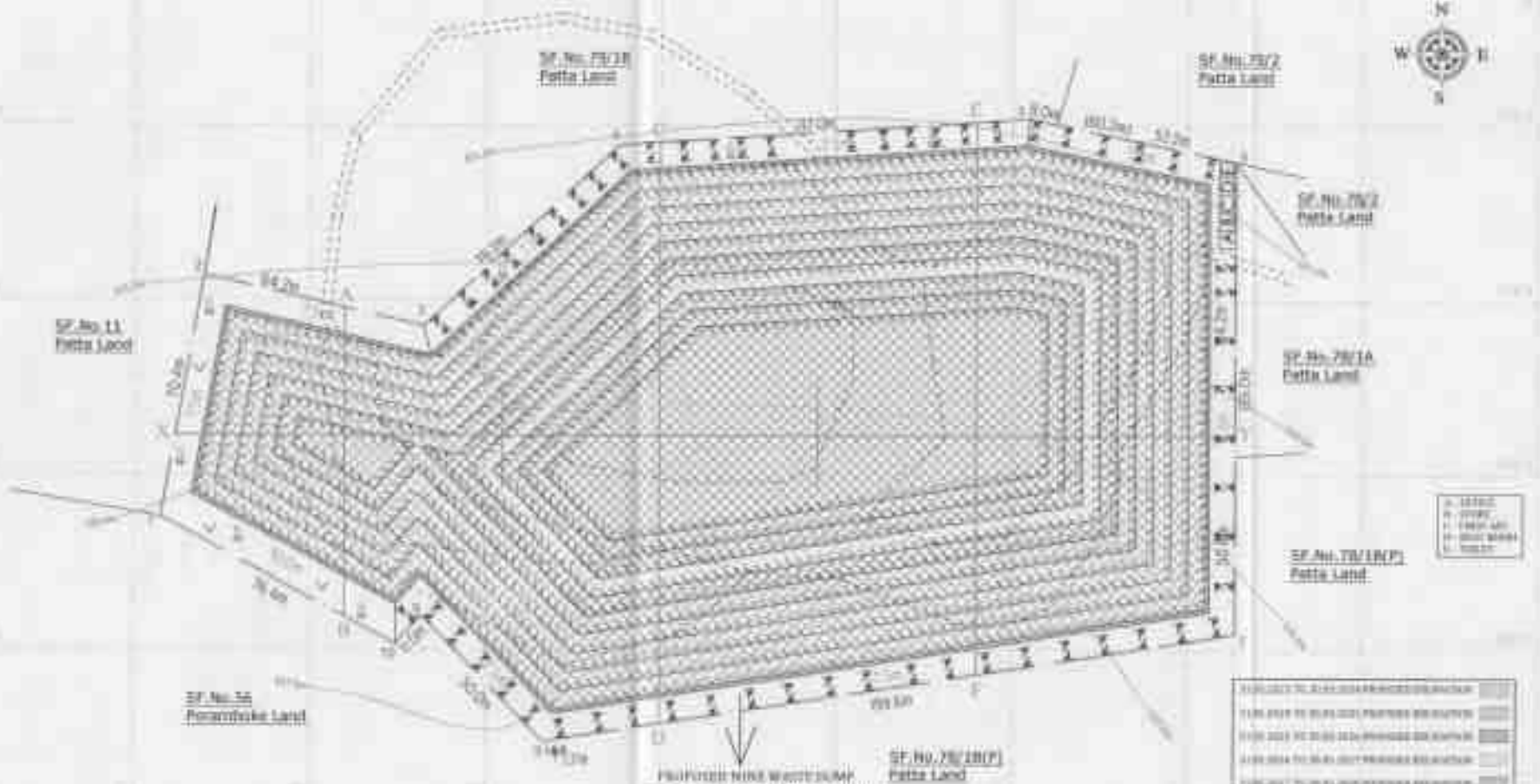


PLATE NO. 11
 DATE OF ISSUANCE: 22-01-2023

LESSEE ADDRESS
 M. SRI DEVARAJAN W. SARDU
 NO. 588, VARESHI SAGAR,
 KOTHARPETTA TOWN,
 KOTHYAGODI DISTRICT - 601 204.

LOCATION OF QUARRY
 EXTENT : 4.00 H. Ha.
 S.T. NO. : 20 (A) & 20 (B) P.
 VILLAGE : KOTHARPETTA
 TALUK : KOTHYAGODI
 DISTRICT : KOTHYAGODI

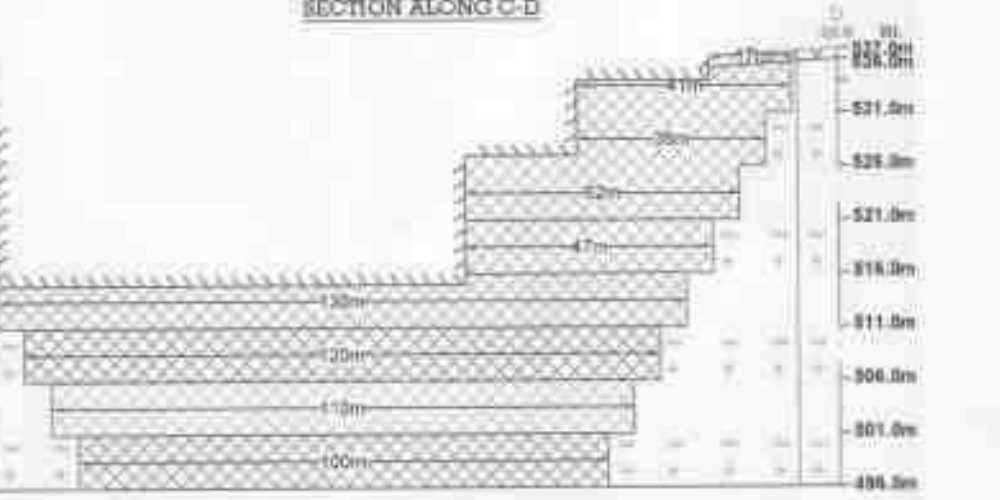
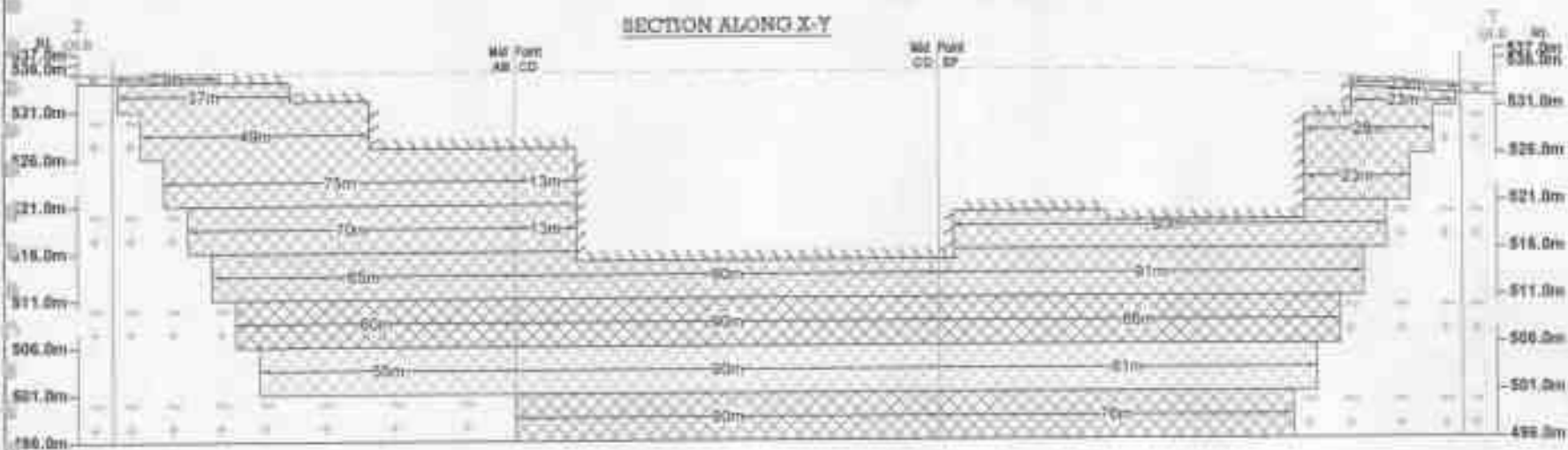
INDEX

- Q1 - BORGARFI
- 2.5m & 30.0m SAFETY DISTANCE
- TEMPORARY BENCH HIGH
- GRAVE
- ROUGH STONE
- QUARRY PIT
- CORRIDOR LINE
- QUARRY ROAD
- PROPOSED MINE WASTE CAMP

SCALE: 1:1000

1:10000 TO 1:250000 PROPOSED QUARRY	
1:10000 TO 1:250000 PROPOSED BENCH	
1:10000 TO 1:250000 PROPOSED CORRIDOR	
1:10000 TO 1:250000 PROPOSED ROAD	
1:10000 TO 1:250000 PROPOSED WASTE CAMP	

PROPOSED MINE WASTE CAMP
 = 945.0m(L) x 7.75m(W) x 2.27m
 = 23667 m³



01.05.2024 TO 30.06.2024 PROPOSED EXCAVATION	
01.05.2024 TO 30.06.2024 PROPOSED EXCAVATION	
01.05.2024 TO 30.06.2024 PROPOSED EXCAVATION	
01.05.2024 TO 30.06.2024 PROPOSED EXCAVATION	
01.05.2024 TO 30.06.2024 PROPOSED EXCAVATION	

PLATE NO: IV-A
 DATE OF SURVEY: 02-11-2022

LESSEE ADDRESS:
 M/S SRI DEVARAJAIA YC SAND
 NO.598, GANDHI NAGAR,
 KRISHNAGIRI TOWN,
 KRISHNAGIRI DISTRICT- 533 001.

LOCATION OF QUARRY:

EXTENT : 4.00.01HA.
 S.F. NO : 78/1A(P) & 78/1B(P).
 VILLAGE : KOTHAPETA,
 TALUK : KRISHNAGIRI,
 DISTRICT : KRISHNAGIRI.

INDEX

Q.L. BOUNDARY	
7.5m & 10.0m SAFETY DISTANCE	
GRAVEL	
ROUGH STONE	
QUARRY PIT	

YEARWISE DEVELOPMENT & PRODUCTION SECTIONS

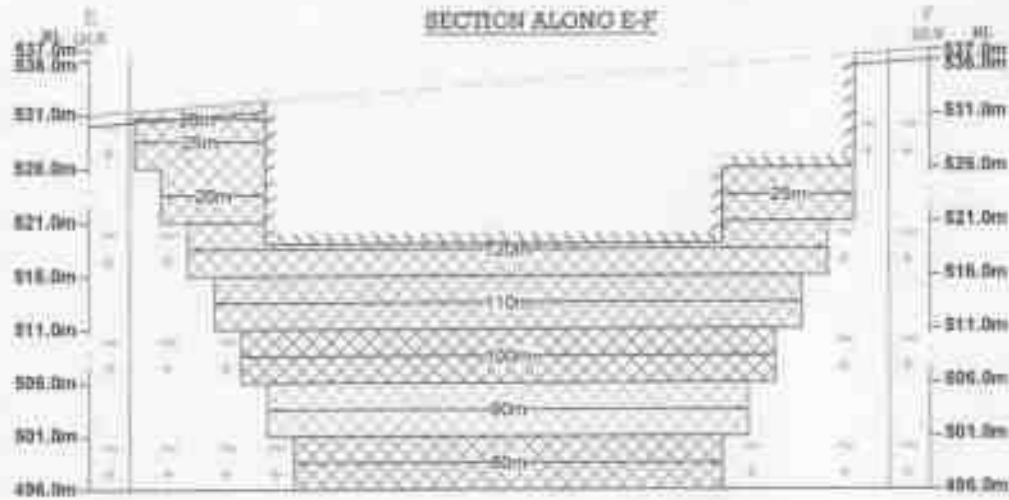
SCALE: HOR-1:1000
 VER-1:500

PREPARED BY:
 CHANDRASEKHAR CHITTECHETTI P.L.
 HAS BEEN CHECKED BY AN AUTHORITY
 OF THE BUREAU OF KNOWLEDGE

(Signature)
 CHANDRASEKHAR S.
 JUAL MANAGER



SECTION ALONG E-F



31.03.2023 TO 30.03.2024 PROPOSED EXCAVATION	
31.03.2024 TO 30.03.2025 PROPOSED EXCAVATION	
31.03.2025 TO 30.03.2026 PROPOSED EXCAVATION	
31.03.2026 TO 30.03.2027 PROPOSED EXCAVATION	
31.03.2027 TO 30.03.2028 PROPOSED EXCAVATION	

YEARWISE DEVELOPMENT AND PRODUCTION										
YEAR	Section	Bench	Length H. in (m)	Width B. in (m)	Depth H. (m)	Volume cu m	Reservable Reserves in cu m @ 55%	Per cu m @ 55%	Gravel in cu m	
31-03-2023 TO 30-03-2024	XY-AB	I	22	6	1	1342	737	268	184	
		II	27	29	5	10790	5931	209		
		III	49	61	5	15290	8410	294		
		IV	75	52	5	19500	10825	373		
		V	70	42	5	14700	8085	283		
	XY-CD	I	1	17	1	1	1	1	1	1
		II	1	45	5	225	125	43		
		III	1	36	5	180	99	34		
		IV	12	62	5	3720	2061	720		
		V	12	47	5	3510	1932	673		
	XY-DE	I	23	26	1	602	332	116		
		II	22	1	5	110	60	21		
III		19	28	5	2655	1467	513			
IV		22	48	5	5280	2904	1014			
V		62	122	5	38000	20910	7330			
TOTAL						126148	118967	4008	799	
31-03-2024 TO 30-03-2025	XY-AB	VI	65	22	5	7275	4000	1396		
	XY-CD	VI	90	120	5	54000	29700	10395		
	XY-DE	VI	61	120	5	36600	20130	7080		
TOTAL						118900	119900	3847		
31-03-2025 TO 30-03-2026	XY-AB	VII	60	22	5	6750	3710	1300		
	XY-CD	VII	90	120	5	54000	29700	10395		
	XY-DE	VII	66	120	5	39600	21630	7620		
TOTAL						103950	98420	3180		
31-03-2026 TO 30-03-2027	XY-AB	VIII	65	12	5	2025	1114	391		
	XY-CD	VIII	60	115	5	49500	27225	9525		
	XY-DE	VIII	61	60	5	18300	10185	3562		
TOTAL						66225	64780	2278		
31-03-2027 TO 30-03-2028	XY-CD	IX	60	120	5	36000	19800	6930		
	XY-DE	IX	75	60	5	22500	12375	4312		
	TOTAL						58500	56370	2000	
GRAND TOTAL						813348	487888	25867	799	

PLATE NO: IV-B

DATE OF SURVEY: 02-11-2022

LESSEE ADDRESS:

M/S.SRI DEVARAJAA W SAND
NO.58E, GANDHI NAGAR,
KRISHNAGERI TOWN,
KRISHNAGERI DISTRICT- 535 001.

LOCATION OF QUARRY:

EXTENT : 4.00 HA.
S.F.NO : 78/1A(P) & 78/1B(P),
VILLAGE : KOTHAPETTA,
TALUK : KRISHNAGERI,
DISTRICT : KRISHNAGERI.

INDEX

- Q.L. BOUNDARY
- 7.5m & 10.0m SAFETY DISTANCE
- GRAVEL
- ROUGH STONE
- QUARRY PIT

YEARWISE DEVELOPMENT & PRODUCTION SECTION

SCALE: HOR-1:1000
VER-1:500

PREPARED BY:

1067 KREKATY THEE'S 1067 THEE'S
HAS BEEN CHECKED BY ME AND FOUND CORRECT
TO THE BEST OF MY KNOWLEDGE

S. SURESH K. S. S.
Sr. Surveyor

DESCRIPTION	PRESENT AREA (Ha)	AREA OF OLD SURVEY IN BARRING RIDGE (Ha)	COLOR CODE
WELL USED BARRING	2.52.0	2.42.0	
INFRASTRUCTURE	Nil	0.01.8	
STAGE	0.01.0	0.01.0	
GREEN BELT ZONE	0.01.0	0.00.0	
UN-UTILIZED AREA	1.88.0	Nil	
GRAND TOTAL	4.20.0	4.20.0	

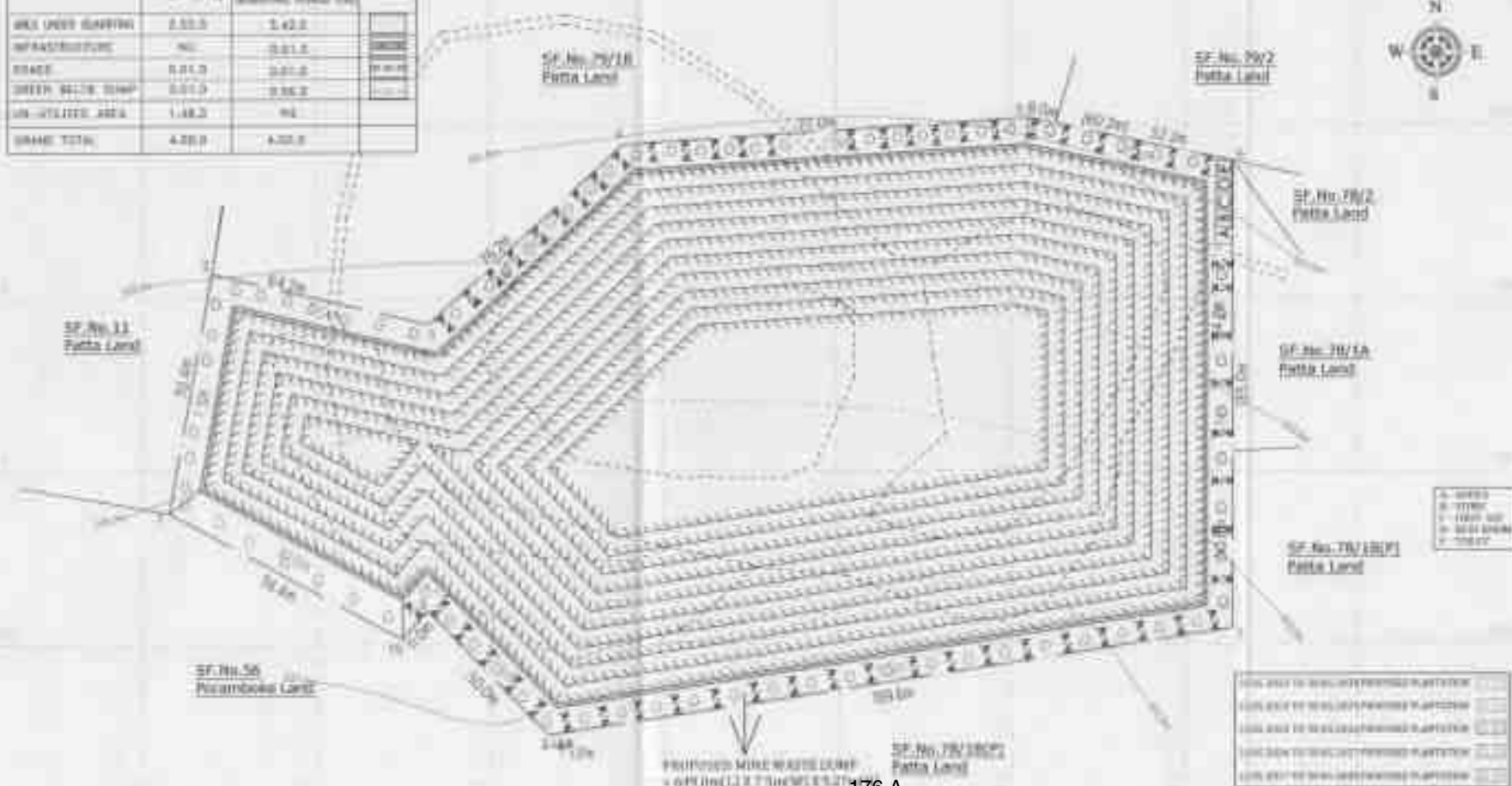


PLATE NO. V
DATE OF SURVEY 11-11-2011

LESSEE ADDRESS
M/S. SRI DEVIKARASALA W. SONS,
MILLERS, GARDENS PALACE,
KODINHADEI TOWN,
KODINHADEI DISTRICT - 525 001.

LOCATION OF QUARRY
VILLAGE : 4.02.0 Ha.
S.F. NO : 79/1A(P) & (P/10/P)
VILLAGE : KODINHADEI,
TALUK : KODINHADEI,
DISTRICT : KODINHADEI.

INDEX

Q.L. BOUNDARY	
7.5m & 10.2m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
WATER	
ROUGH STONE	
QUARRY PIT	
CONTOUR LINE	
QUARRY ROAD	
WIRE LAYOUT	
PROPOSED MINE WASTE DUMP	

SCALE - 1:2000

PROPOSITOR
SRI DEVIKARASALA W. SONS
MILLERS, GARDENS PALACE
KODINHADEI TOWN
KODINHADEI DISTRICT - 525 001.

(Signature)
SRI DEVIKARASALA W. SONS

12° 32' 49.8798" N

OCTOBER TO DECEMBER



PLATE NO. VI

DATE OF SURVEY: 02-11-2024

LESSEE ADDRESS:

M/S. SRI DEVARAJAIA M SAND
NO. 588, GANDHI NAGAR,
KRISHNAGIRI TOWN,
KRISHNAGIRI DISTRICT - 636 001



INDEX

Q.L. BOUNDARY	
500M RADIUS	
300M RADIUS	
60M RADIUS	
APPROACH ROAD	
QUARRY ROAD	
TREES	
BARREN LAND	
WIND DIRECTION	
ADJACENT QUARRY	
SEASONAL STREAM (COAI)	
LOW POWER EB. LINE	
HILLOCK	

LOCATION OF QUARRY

EXTENT : 4.00.0 Ha,
S.P. NO : 78/1A(P) & 78/1B(P),
VILLAGE : KOTHAPETTA,
TALUK : KRISHNAGIRI,
DISTRICT : KRISHNAGIRI.

ENVIRONMENT PLAN

SCALE: 1:5000

PREPARED BY:

I DO HEREBY CERTIFY THAT THE PLATE
HAS BEEN CHECKED BY ME AND IN CONCORD
TO THE BEST OF MY KNOWLEDGE

SURVEYOR
GOVERNMENT OF TAMIL NADU

Towards
Maharajakudal

78° 12' 39.2801" E

78° 12' 39.2801" E

Krishnagiri
Town

Maharajakudal road

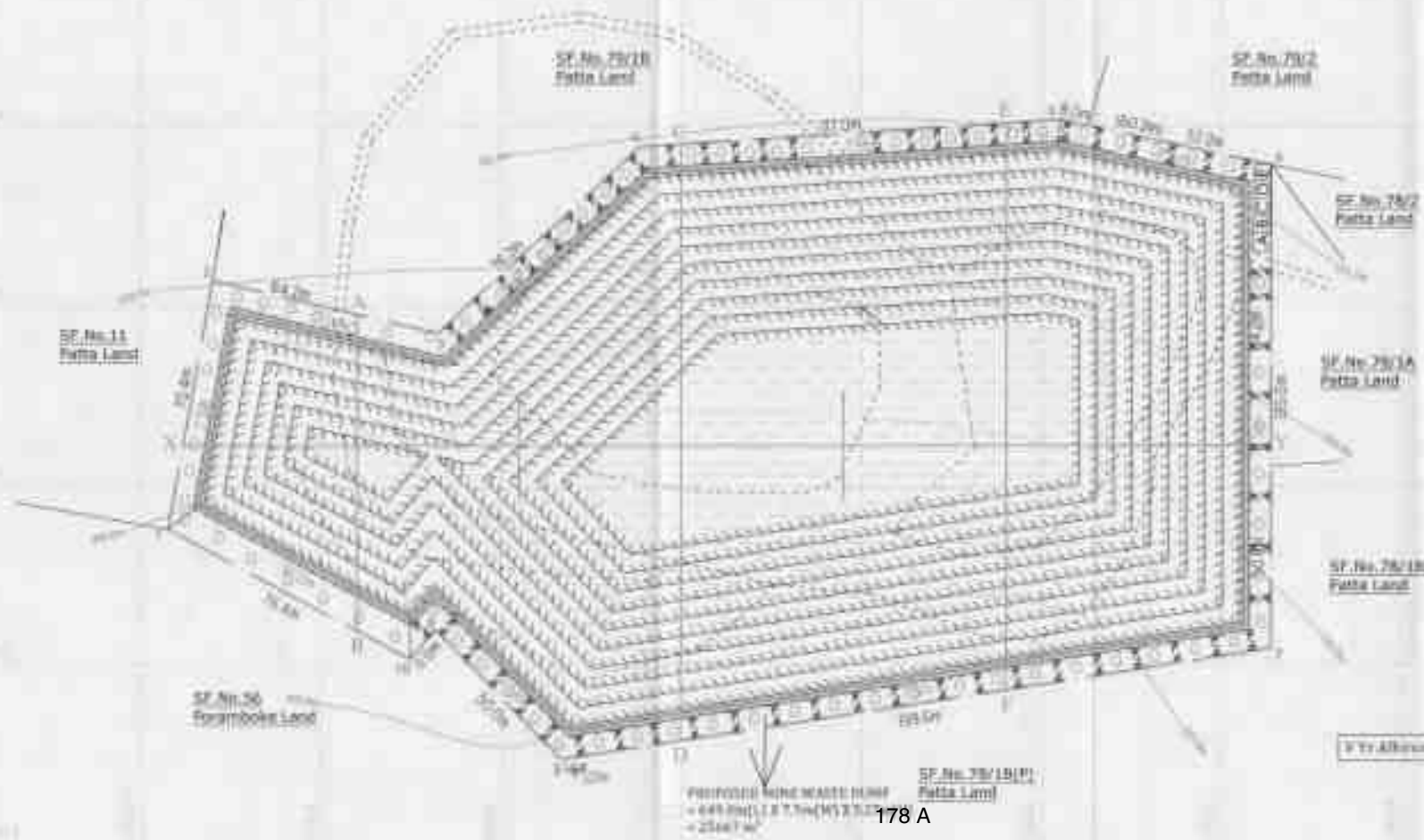
Towards
Kothapetta

12° 32' 46.6000" N

JULY TO SEPTEMBER

PLOT No. VII
 DATE OF SURVEY: 22/11/2022
 LESSER ADDRESS: 11/15/200
 NO. 001, COYAMBAKUR, M. ROAD-68
 NO. 001, GARDOLLAHALLI,
 MEDHANGUDI TOWN,
 KUSHAMBE DISTRICT-605101

LOCATION OF QUARRY:
 EXTENT: 425.0 Ha.
 S. NO: 26/1A(P) & 26/1B(P)
 VILLAGE: KUSHAMBE,
 TALUK: KUSHAMBE,
 DISTRICT: KUSHAMBE.



1. GRAVE
 2. ROAD
 3. QUARRY
 4. ALLIANCE
 5. FENCE

INDEX

Q1. QUARRY	[Symbol]
7.5m & 15.0m SAFETY DISTANCE	[Symbol]
TEMPORARY BENCH MARK	[Symbol]
GRAVE	[Symbol]
ROAD MARK	[Symbol]
QUARRY PIT	[Symbol]
CONTOUR LINE	[Symbol]
QUARRY ROAD	[Symbol]
FENCING	[Symbol]
PERMIT WALL	[Symbol]
ULTIMATE PIT LIMIT	[Symbol]
PROPOSED WATER STORAGE	[Symbol]
PROPOSED RAMP DRIVE ROAD	[Symbol]

SCALE: 1:1000

PREPARED BY:
 [Signature]
 [Name]
 [Address]

PROPOSED RAMP DRIVE ROAD
 = 649.0m (L) x 7.14m (W) x 3.0m
 = 25667 m²



TOTAL DEPTH = 41m

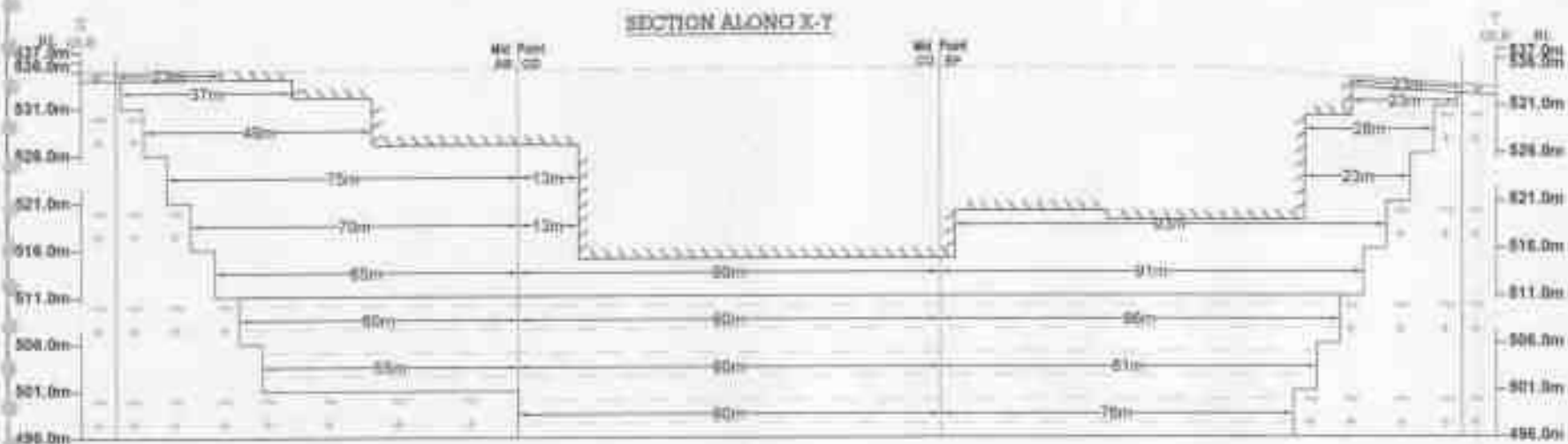
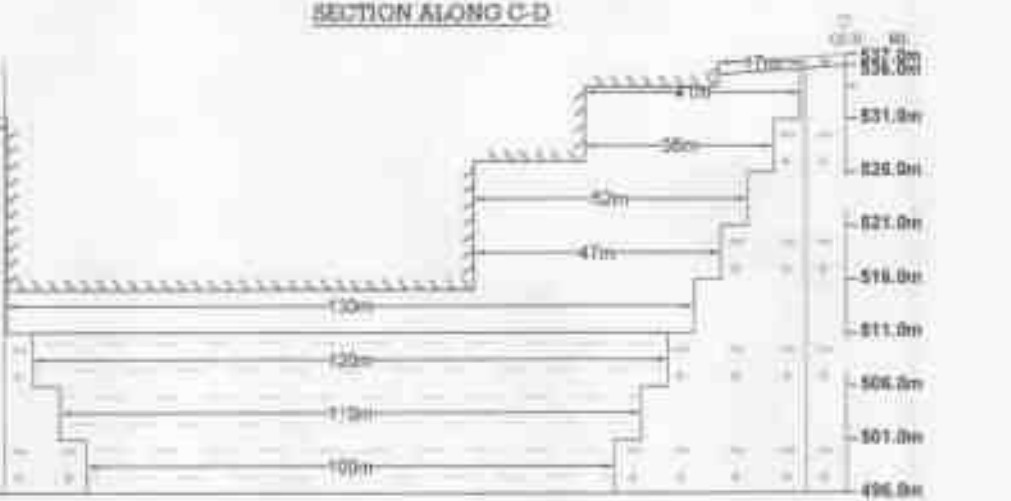
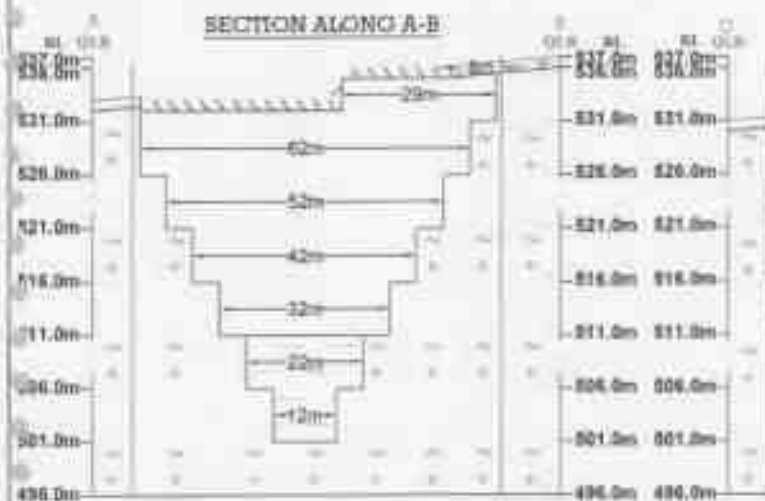


PLATE NO: VII-A
 DATE OF SURVEY: 02-11-2022
 LESSEE ADDRESS:
 M/S. SRI DEVI RAJASIA M SAND
 NO 508, GANDHI NAGAR,
 KRISHNAGERI TOWN,
 KRISHNAGIRI DISTRICT - 635 001.
 LOCATION OF QUARRY:
 EXTENT : 4.00/2 Ha.
 S.F. NO : 75/1A(P) & 75/1B(P).
 VILLAGE : KOTHAPETTA,
 TALUK : KRISHNAGIRI,
 DISTRICT : KRISHNAGIRI.



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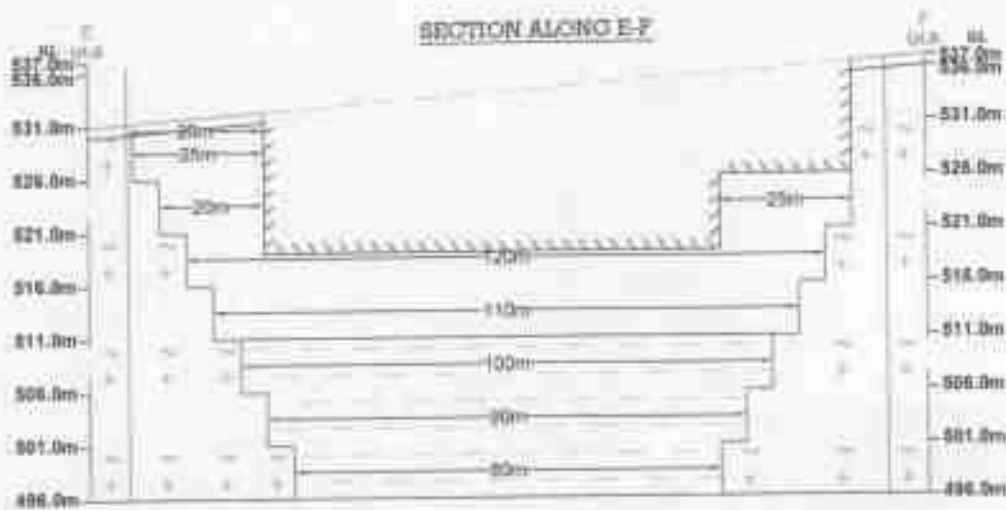
Q.L. BOUNDARY	
7.5m & 10.0m SAFETY DISTANCE	
GRAVEL	
ROUGH STONE	
QUARRY PIT	
ULTIMATE PIT SLOPE	
PROPOSED WATER STORAGE	

CONCEPTUAL & FINAL
 MINE CLOSURE SECTIONS
 SCALE: HOR-1:1000
 VER-1:500

PREPARED BY:
 SRI DEVI RAJASIA M SAND
 NO 508, GANDHI NAGAR,
 KRISHNAGIRI TOWN,
 KRISHNAGIRI DISTRICT - 635 001.

ULTIMATE PIT DIMENSION
 = 287.0m(L) X 121.0m(W) Avg X 41.0m(D)

SECTION ALONG E-F



TOTAL DEPTH = 41m

ULTIMATE PIT DIMENSION
= 287.0m(L) X 121.0m(W) Avg X 41.0m(D)

PLATE NO: VII-B
DATE OF SURVEY: 02-11-2022
LESSEE ADDRESS:
M/s SRI DEVARAJA M SAND
NO.568, GANDHI NAGAR,
KRISHNAGIRI TOWN,
KRISHNAGIRI DISTRICT- 535 001.
LOCATION OF QUARRY:
EXTENT : 4.00.0 HA.
S.T.NO : 76/1A(P) & 76/1B(P).
VILLAGE : KOTHAPETTA,
TALUK : KRISHNAGIRI,
DISTRICT : KRISHNAGIRI.

MINERABLE RESERVE								
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in m ³	Reserve Percentage % (1.2 to 2.0%)	Area in m ² @ 5% m ² @ 5%	Gravel in m ³
KV-AD	I	22	8	1	176	2112	288	184
	II	27	24	5	3240	3924	528	336
	III	48	62	5	15120	18144	2352	1488
	IV	72	82	5	29520	35424	4608	2928
	V	70	42	5	14700	17640	2304	1464
	VI	62	22	5	6840	8208	1072	688
	VII	80	22	5	8800	10560	1392	888
	VIII	55	12	5	3300	3960	516	336
TOTAL					75055	90072	11752	7504
KV-CD	I	1	17	1	17	204	27	17
	II	1	41	5	205	246	32	20
	III	1	36	5	180	216	28	18
	IV	12	52	5	3120	3744	488	312
	V	12	47	5	2820	3384	440	282
	VI	30	130	5	19500	23400	3024	1950
	VII	30	170	5	27000	32400	4224	2700
	VIII	30	110	5	16500	19800	2592	1650
	IX	30	100	5	15000	18000	2352	1500
	X	30	100	5	15000	18000	2352	1500
TOTAL					213020	255624	33384	2130
KV-DF	I	22	28	1	616	7392	984	616
	II	24	1	5	120	1440	192	120
	III	28	22	5	3520	4224	552	352
	IV	22	45	5	2475	2970	392	2475
	V	93	120	5	55800	66960	8784	5580
	VI	91	110	5	50025	60030	7800	50025
	VII	84	100	5	42000	50400	6560	42000
	VIII	91	90	5	40950	49140	6410	40950
	IX	70	80	5	28000	33600	4380	28000
	X	70	80	5	28000	33600	4380	28000
TOTAL					234400	281200	36324	2344
GRAND TOTAL					513305	617890	80607	5133

INDEX

- Q.L. BOUNDARY
- 7.5m & 10.0m SAFETY DISTANCE
- GRAVEL
- ROUGH STONE
- QUARRY PIT
- ULTIMATE PIT SLOPE
- PROPOSED WATER STORAGE

CONCEPTUAL & FINAL
MINI CLOSURE NOTIONS
SCALE: HOR:1:1000
VER:1:500

PREPARED BY:
SRI DEVARAJA M SAND
NO.568, GANDHI NAGAR,
KRISHNAGIRI TOWN,
KRISHNAGIRI DISTRICT- 535 001.

S. J. SRINIVASAN
09442221849

DESCRIPTION	PERCENT AREA (%)	AREA IN SQ. METERS (sq. m)	AREA IN SQ. FEET (sq. ft)
AREA UNDER QUARRY	2.813	5,423.2	58400
INFRASTRUCTURE	00	0.000	0
ROADS	0.013	2.513	27
GREEN BELT & BUMP	0.013	2.513	27
UN-UTILIZED WCA	1.463	NA	NA
GRAND TOTAL	4.302	4,959.0	53354

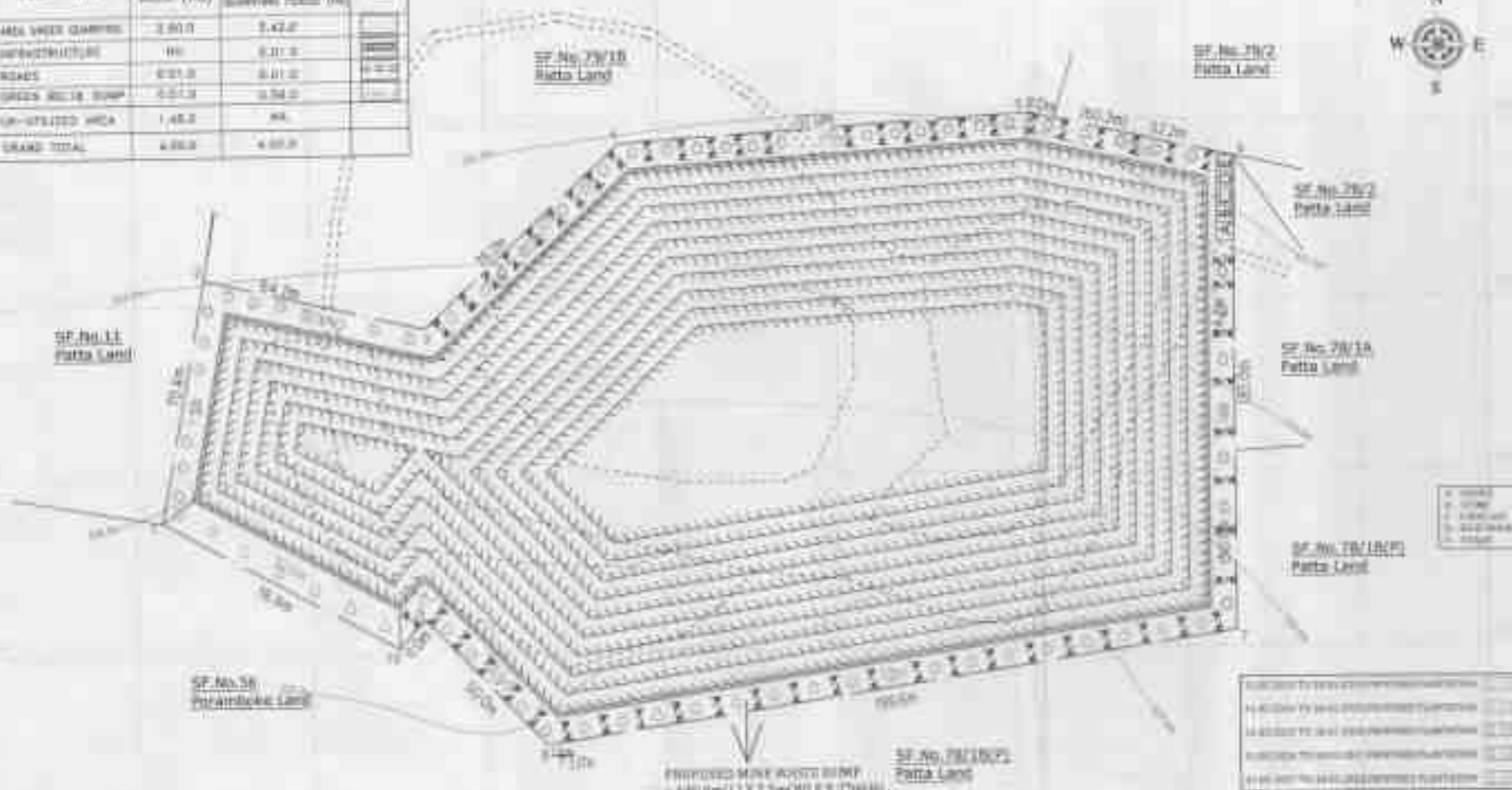


PLATE NO. 181 A
 DATE OF WORK: 18/11/2024
 LESSEE ADDRESS:
 M. SRI DEVARAJAN, P. SRI
 NO. 588, GANDHI ROAD,
 KUSHNAGUDI TOWN,
 KOTHAMANGUDI DISTRICT - 630 002

LOCATION OF QUARRY
 EXTENT : 4.302 Ha.
 S. T. NO. : 79/1A & 79/1B
 VILLAGE : KOTHAMANGUDI
 TALUK : KUSHNAGUDI
 DISTRICT : KUSHNAGUDI

- MINES
- Q.L. BOUNDARY
 - 7.5m & 10.0m SAFETY DISTANCE
 - TEMPORARY BENCH MARK
 - GRAVEL
 - ADJACENT ROAD
 - QUARRY PIT
 - CONTOUR LINE
 - QUARRY ROAD
 - MINES LAYOUT
 - PROPOSED MINE WASTE DUMP

SCALE : 1:1000

DESIGNED BY:
 M. SRI DEVARAJAN, P. SRI
 NO. 588, GANDHI ROAD,
 KUSHNAGUDI TOWN,
 KOTHAMANGUDI DISTRICT - 630 002

PROPOSED MINE WASTE DUMP
 = 440m (L) X 75m (W) X 5.0m
 = 25500 m³



भारतसरकार
GOVERNMENT OF INDIA
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE
Integrated Regional Office,
1st Floor, Additional Office Block for GPOA, Shastri Bhawan,
Haddows Road, Nungambakkam, Chennai – 600006



EP/12.1/2023-24/SEIAA/65/TN/967

09.08.2023

To

Sri Devaraajaa 'M' Sand
No.58B, Gandhi Nagar,
Krishnagiri Town and District – 635 001.

Subject: DEIAA – Application for Environment Clearance for the Proposed Rough Stone quarrying over an extent of 4.00.0 Hectare in patta land S.F. No. 78/1A (Part) & 78/1B (Part), Kothabetta Village of Krishnagiri Taluk, Krishnagiri District preferred by Sri Devarajaa 'M' Sand, No.58B Gandhi Nagar, Krishnagiri Town and District - issue of Environmental Clearance – Reg.

Reference No: Lr. No. 35/DEIAA-KGI/EC.No.27/2018 dated 27.02.2018.

Your Letter dated 19.07.2023.

Sir,

With reference to the above mentioned subject, please find enclosed herewith a Certified Copy of the Compliance Report. This has been approved by the DDGF(C) vide diary no. 568... dated 28.07.2023

Yours faithfully,

C. Palpandi
(Dr. C. Palpandi)
Scientist 'D'

Encl: As above.

Dr. C. Palpandi,
Scientist "D"
Government of India
Min. of Environment Forest and Climate Change
Integrated Regional Office
1st Floor, Additional Office Block for GPOA,
Shastri Bhawan, Haddows Road
Nungambakkam, Chennai - 600 006.

CERTIFIED COMPLIANCE REPORT

Subject: DEIAA – Application for Environment Clearance for the Proposed Rough Stone quarrying over an extent of 4.00.0 Hectare in patta land S.F. No. 78/1A (Part) & 78/1B (Part), Kothabetta Village of Krishnagiri Taluk, Krishnagiri District preferred by Sri Devarajaa 'M' Sand, No.58B Gandhi Nagar, Krishnagiri Town and District - issue of Environmental Clearance – Reg.

EC Ref. No : Lr. No. 35/DEIAA-KGI/EC.No.27/2018 dated 27.02.2018

Project Proponent: Sri Devaraajaa 'M' Sand
No.58B, Gandhi Nagar,
Krishnagiri Town and District.

Present Status of the Project:



The District Level Environment Impact Assessment Authority (DEIAA), Krishnagiri - Tamil Nadu accorded Environmental Clearance (EC) to the Rough Stone Quarry of Sri Devaraajaa 'M' Sand, Kothabetta Village, Krishnagiri Taluk, Krishnagiri District, and Tamil Nadu. It is an open cast, semi-mechanized mining with an approved depth of mining of 71 meter (25m above ground level and 46m below ground level). Now they had mined up to a depth of 20 meter below ground level. The present mining has not intersected the ground water table. The total Mine Lease (ML) Area is 4.00.0 Ha. Out of total ML area, broken-up area is 2.50.0 Ha. The project cost is Rs. 30,30,000/- . EMP cost is Rs. 3,70,000/-.

The quarry is not in operation. As informed by the Project Proponent, the mining work was stopped on 30th May 2023. The mine had valid lease from 31.05.2018 to 30.05.2023. Now, they had applied for renewal of EC with SEIAA – TN.

The Project Proponent (PP) has obtained Consent to Operate (CTO) for Air vide proceedings No.F.1681HSR/RS/DEE/TNPCB/HSR/A/2022 dated 16.08.2022 and Water vide proceeding No.F.1681HSR/RS/DEE/TNPCB/HSR/W/2022 dated 16.08.2022 from Tamil Nadu Pollution Control Board (TNPCB), Hosur and is valid up to **29.05.2023**.

PP stated that there is no habitation and approved layouts are situated within a radius of 300 metres from the lease area. However, the nearest village of Chinimalpalli situated at the distance of 1.12 km on the North-East side of the quarry lease area.

The Nearest Railway station is Rayakottai which is located about 20.2 km on the Southwest side of the area. The Nearest National Highway (NH-44) Srinagar - Kanyakumari road is situated about 0.86 km on the Southwestern side of the quarry lease area.

There is no reserve forest / social forest / wildlife sanctuary observed within 1 km radius of the quarry lease area. There is no temple or any other archeological importance within the radius of 300 meters from the lease area. There are no wild life sanctuaries, Reserve Forest & National parks within the radius of 1 km from the quarry area. There is no Rivers, Lakes within the 500m distance from the quarry lease area. The Krishnagiri dam is located at the distance of 7.6 km Southwestern side of the lease area.

Environmental monitoring was carried out in the core and buffer zone of the lease area by a NABL accredited laboratory. Ambient Air Quality (AAQ) was carried out at 3 locations in and around the quarry site and the results of all parameters are well within the prescribed limits of NAAQ Standards, 2009. Personal Exposure Monitoring (PEM) for free silica was carried out as per National Institute for Occupational Safety and Health (NIOSH) guidelines. Ambient Noise level monitoring and Work Place Noise Monitoring was carried out at 4 locations of the quarry site and the monitoring results are within prescribed limits as per MoEFCC/ CPCB norms. A Water sample was collected from a bore well near the quarry and analysed as per Indian Standard (IS). Results of all parameters are well within the permissible limits of IS: 10500:2012.

The PP has requested the Integrated Regional Office, Ministry of Environment, Forest & Climate Change (MoEF & CC), Chennai to provide Certified Compliance Report on Environmental Clearance towards applying for renewal of EC with the SEIAA-TN.

The above project was monitored on 25.7.2023 along with representative of the Project Proponent. The status of compliance on the stipulated conditions contained in the EC cited above is given below in Part III.

Date of Monitoring: **25.07.2023.**

PART – III

Environment Clearance Conditions:

Conditions to be Complied before Commencing Mining Operations:-

S. No.	EC Conditions	Status of Compliance
1.	The project proponent shall advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing the public that <ul style="list-style-type: none"> i. The project has been accorded Environmental Clearance. ii. Copies of clearance letters are available with the Tamil Nadu 	Refer below. Advertisements were not given in two local Newspapers.

S. No.	EC Conditions	Status of Compliance
	Pollution Control Board. iii. Environmental Clearance may also be seen on the website of the SEIAA. iv. The advertisement should be made within 7 days from the date of receipt of the clearance letter and a copy of the same shall be forwarded to the SEIAA.	
2.	The applicant has to obtain land use classification as industrial use before issue/renewal of mining lease.	Refer below. Before renewing the mining lease, the land use classification will be obtained as industrial use.
3.	NOC from the Standing committee of the NBWL shall be obtained, if protected areas are located within 10 Km from the proposed project site.	Complied. During the visit, it was observed that there is no Environmental sensitive areas, Protected areas as per Wildlife Protection Act, 1972 (Tiger reserve, Elephant reserve, Biospheres, National parks, Wildlife sanctuaries, community reserves and conservation reserves) are available within 10 Km radius of the project site. Hence NBWL Clearance is not required.
4.	The project proponent shall comply the conditions laid down in the Section V, Rule 36 of Tamil Nadu Minor Minerals Concession Rules 1959.	Complied. The PP informed that the stipulated conditions laid down in Section V, Rule 36 of Tamil Nadu Minor Minerals Concession Rules 1959, Drilling, Blasting, Loading (at mines) and Transport are being complied.
5.	A copy of the Environmental Clearance letter shall be sent by the proponent to the concerned Panchayat, Town Panchayath/Panchayath union, Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the proponent and also kept at the site, for the general public to see.	Complied. The PP informed that a copy of the EC letter was submitted to local Panchayat. The PP also claimed that no suggestion / representation received from public and local NGO were received while processing the proposal. The EC letter was made available at the site for the general public to see. The EC letter was not uploaded on the website of the proponent.

S. No.	EC Conditions	Status of Compliance
6.	Quarry lease area should be demarcated on the ground with wire fencing to show the boundary of the lease area on all sides with red flags on every pillar shall be erected before commencement of quarrying.	<p>Complied.</p> <p>During the visit, it was observed that a wire fence is erected around the quarry lease area and red flags are mounted on each pillar on all sides to show the boundary of the lease area. The boundary pillars were erected at all corners of the lease area.</p> <p>Refer photos as Annexure – I.</p>
7.	The proponent shall ensure that First Aid Box is available at site.	<p>Complied.</p> <p>First Aid Box is available at the quarry area.</p> <p>Refer photos as Annexure – II.</p>
8.	The excavation activity shall not alter the natural drainage pattern of the area.	<p>Complied.</p> <p>No alteration of drainage pattern of the lease area was observed during the visit.</p>
9.	The excavated pit shall be restored by the project proponent for useful purposes. In this regard, the proponent shall deposit a sum of Rs. 5,00,000/- (Rupees Five Lakhs only) in the name of District Collector Krishnagiri in the form of fixed deposit. The said fixed deposit will be refunded after restoration of pit after end of the lease period.	<p>Agreed to comply.</p> <p>The PP has agreed to restore the excavated pit for useful purposes after completion of the project.</p>
10.	The proponent shall quarry and remove only in the permitted areas as per the approved Mining Plan details.	<p>Agreed to comply.</p> <p>The PP has removed Rough Stone and Gravel material in the permitted areas as per the approved Mining Plan.</p>
11.	The quarrying operation shall be restricted between 7AM and 5 PM.	<p>Complied.</p> <p>As informed by the PP that the quarry operations are being carried out between 7AM and 5 PM only. During the visit, no mining activity was carried out.</p>
12.	The proponent shall take necessary measures to ensure that there shall not be any adverse impacts due to quarrying operation on the nearby human	<p>Complied</p> <p>There is no approved habitation near to the quarry. However, the nearest village</p>

S. No.	EC Conditions	Status of Compliance
	habitations, by way of pollution to the environment.	of Chinimalpalli situated at the distance of 1.12 km on the North-East side of the quarry lease area. Also the PP informed that there is no adverse impact due to quarrying operations to the Environment.
13.	A minimum distance of 15 mts. From any civil structure shall be kept from the periphery of any excavation area.	Complied. During the visit, it was observed that there is no civil structure located within 15 m distance from periphery of quarry.
14.	Depth of quarrying shall be 2m above the ground water table /approved depth of mining whichever is lesser to be considered as a safe guard against Environmental Contamination and over exploitation of resources.	Complied. The approved depth of the quarry is <u>71m</u> (25m Above ground level and 46m below ground level). As informed by the PP, the ground water table Occurrences <u>82m</u> at depth below ground level. At present the depth of mining activity is 20m, which is not intersected the ground water table. The PP assured that the quarrying will be done up to the approved depth of mining. However if required, we will obtain NOC for working below GW table from CGWA.
15.	The mined out pits should be backfilled where warranted and area should be suitably landscaped to prevent environmental degradation. The mine closure plan as furnished in the proposal shall be strictly followed with back filling and tree plantation.	Agreed to comply. Backfilling is not started and the PP has agreed to follow the backfilling as per the mine closure plan. Also have agreed to carryout landscaping and tree plantation after completion of the mining work.
16.	Wet drilling method is to be adopted to control dust emissions. Delay detonators and shock tube initiation system for blasting shall be used so as to reduce vibration and dust.	Complied. During the visit, no mining activity was carried out. Because of this, drilling and blasting activities were not observed. However, the PP claimed that wet drilling method was adopted to control the dust emission. Milli second detonators are being used preferably 25-50 m per delay to control vibrations.

S. No.	EC Conditions	Status of Compliance
17.	Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities.	<p>Complied.</p> <p>The PP informed that the Drilling and Blasting were done with statutory mining personnel having competency certificate issued by the DGMS, Dhanbad. They carry out drilling and blasting in a safe and scientific manner as per DGMS guidelines.</p> <p>Refer as Annexure – III.</p>
18.	The explosives shall be stored at site as per the conditions stipulated in the permits issued by the licensing Authority.	<p>Complied.</p> <p>The PP informed that the explosive material is not stored at the site and it was taken from licensed agent as and when it is required and used immediately.</p> <p>Agreement for blasting had been made with M/s. VELAVA MININGS having PESO license in No. E/SC/TN/22/732 (E104893).</p> <p>Refer Annexure - IV.</p>
19.	Blasting shall be carried out after announcing to the public adequate through public address system to avoid any accident.	<p>Complied.</p> <p>The PP informed that blasting was carried out after announcing the public through public address system, centrist, whistling, siren and posting red flags to avoid any accident.</p>
20.	A study has to be conducted to assess the optimum blast parameters and blast design to keep the vibration limits less than prescribed levels and only such design and parameters should be implemented while blasting is done. Periodical monitoring of the vibration at specified location to be conducted and records kept for inspection.	<p>Agreed to comply.</p> <p>No such study has been conducted to assess the optimum blast parameters and blast design and details in this regard were not made available by the PP. PP has informed to conduct the study in future.</p> <p>However, the vibration levels are monitored and the observed Peak Particle Velocity value is within the limit as per DGMS standards, i.e. 5.0 mm/sec.</p>

S. No.	EC Conditions	Status of Compliance
		Refer report as Annexure – V.
21.	The Proponent shall take appropriate measures to ensure that the GLC shall comply with the revised NAAQ norms notified by MoEF, Gol on 16.11.2009.	<p>Complied.</p> <p>AAQ levels were monitored by PP through NABL accredited laboratory to comply with the revised NAAQ norms.</p> <p>Test Reports are enclosed in Annexure – VI.</p>
22.	<p>The following measures are to be implemented to reduce Air Pollution during transportation of mineral</p> <ol style="list-style-type: none"> i. Roads shall be graded to mitigate the dust emission. ii. Water shall be sprinkled at regular interval on the main road and other service roads to suppress dust. 	<p>Complied.</p> <p>The following measures are implemented to reduce Air Pollution.</p> <ol style="list-style-type: none"> i. Roads were graded to reduce the dust emissions. ii. Water sprinkling was carried out on the main road and other service roads regularly to suppress dust.
23.	<p>The following measures are to be implemented to reduce Noise Pollution.</p> <ol style="list-style-type: none"> i. Proper and regular maintenance of vehicles and other equipment. ii. Limiting time exposure of workers to excessive noise. iii. The workers employed shall be provided with protection equipment and earmuffs etc. iv. Speed of trucks entering or leaving the mine is to be limited to moderate speed of 25 kmph to prevent undue noise from empty trucks. 	<p>Complied.</p> <p>The following measures are implemented to reduce Noise Pollution.</p> <ol style="list-style-type: none"> i. Proper maintenance of vehicle and other equipment's are carried out. ii. Limiting time exposure of workers to extensive noise. iii. Personnel Protective Equipment's (PPE) are provided to the workers. iv. Vehicles speed is restricted to 25kpmh.
24.	Measures should be taken to comply with the provisions laid under Noise Pollution (Regulation and Control) (Amendment) Rules, 2010, dt: 11.01.2010 issued by the MoE&F, Gol to control noise to the prescribed levels.	<p>Complied.</p> <p>The PP informed that the inbuilt cabin facility in JCB is available. Ear plugs / muffs are provided for workers.</p> <p>The noise levels in the quarry area were monitored through NABL accredited laboratory and the values are within the limit.</p> <p>Report is enclosed in Annexure – VII.</p>
25.	Suitable conservation measures to augment groundwater resources in the	Agreed to comply.

S. No.	EC Conditions	Status of Compliance
	area shall be planned and implemented in consultation with Assistant Director, Ground Water Division, PWD, Dharmapuri.	The PP informed that the rain water is collected in the quarry pit during rainy season and allowed for percolation. This is helping to augment the ground water. However, they have not consulted RD, CGWB.
26.	Rain water harvesting to collect and utilize the entire water falling in land area should be provided by construction of a storage tank with a capacity of 5,00,000 liters and the rain water harvested in the entire quarry area should be stored in it and used for the quarry purpose like dust prevention, wet drilling, providing water for green belt etc.	Agreed to comply. The PP informed that the rain water is collected in the quarry pit during rainy season and allowed for percolation. PP agreed to construct the rain water storage tank with a capacity of 5,00,000 liters.
27.	Permission from the competent authority should be obtained for drawl of ground water, if any, required for this project.	Complied. As informed by the PP, the ground water table Occurrence 82 m at depth below ground level. Mining has been done up to 20 m. There was no intersection of the ground water table.
28.	Topsoil, if any, shall be stacked properly with proper slope with adequate measures and should be used for plantation purpose.	Complied. As informed by the PP that whatever topsoil was removed the same was stacked and used for plantation purpose.
29.	The following measures are to be adopted to control erosion of dumps:- i. Retention/ toe walls shall be provided at the foot of the dumps. ii. Worked out slopes are to be stabilized by planting appropriate shrub/ grass species on the slopes.	Refer below. There is no Over Burden (OB) and because of this there is no OB dump. However reject materials are stored at identified place within ML area. The PP agreed to stabilize the worked out slopes by planting the appropriate species.
30.	Waste oils, used oils generated from the EM machines, mining operations, if any, shall be disposed as per the Hazardous Wastes (Management, Handling, and trans boundary movement) Rules, 2008 and its amendments thereof to the recyclers authorized by TNPCB.	Complied. As informed by PP the waste oil is collected, stored and disposed through TNPCB authorized recyclers.

S. No.	EC Conditions	Status of Compliance
31.	Concealing the factual data or failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	<p>Agreed to comply.</p> <p>The PP has agreed to comply with this condition.</p>
32.	Rain water getting accumulated in the quarry floor shall not be discharged directly to the nearby stream or water body. If it is to be let into the nearby water body, it has to be discharged into a silt trap on the surface within the lease area and only the overflow after allowing settling of soil be let into the nearby waterways. The silt trap should be of sufficient dimensions to catch all the silt water being pumped out during one season. The silt trap should be cleaned of all the deposited silt at the end of the season and kept ready for taking care of the silt in the next season. Photographs of the silt trap should be furnished before commencing quarry operation.	<p>Agreed to comply.</p> <p>The PP informed that the rain water is collected in the quarry pit and used for dust suppression as well as for green belt development. No rain water is discharged directly to nearby stream or water body.</p>
33.	The lease holder shall undertake adequate safeguard measures during extraction of material and ensure that due to this activity, the hydro-geological regime of the surrounding area shall not be affected. Regular monitoring of ground water level and quality shall be carried out around the mine lease area during the mining operation. If at any stage, if it is observed that the groundwater table is getting depleted due to the mining activity; necessary corrective measures shall be carried out. The Assistant Director Ground water Division, PWD Dharmapuri shall monitor.	<p>Complied.</p> <p>The mining activity has no intersected the ground water level. In view of this, the PP informed that the hydro-geological regime of the surrounding area was not affected.</p> <p>Water Quality and Ground Water level was regularly monitored through third party NABL accredited laboratory and as per the report there is no adverse impact was noticed.</p> <p>The PP has assured that in case of any adverse impact is noticed, appropriate measures will be taken immediately.</p> <p>The test report is enclosed in Annexure - VIII.</p>

S. No.	EC Conditions	Status of Compliance
34.	No tree-felling shall be done in the leased area, except only with the permission from competent Authority.	<p>Complied.</p> <p>The PP informed that no tree was cut in the mining lease area.</p>
35.	To take up environmental monitoring of the proposed quarry site before, during and after the mining activities including vibration study data, water, air & flora/fauna environment, slurry water generated/disposed and method of disposal, involving a reputed academic Institution and it should be monitored by the District Environmental Engineer, TNPCB, Hosur on yearly basis	<p>Agreed to comply.</p> <p>Environmental Monitoring is being carried out before, during and after the mining activities through a third party NABL accredited laboratory. The monitored data shows that the values are within the limits. Vibration study, Flora and Faunal study were also conducted.</p>
36.	It shall be ensured that the total extent of nearby quarries(existing, abandoned and proposed) located within 500 meter radius from the periphery of this quarry is not exceeding 25 hectares within the mining lease period of this application.	<p>Complied.</p> <p>There are many quarries are located within 500 m radius from the periphery of this quarry and the total extent of the quarries is not exceeding 25 hectares. The Extent Certificate issued by Deputy Director, Department of Geology & Mines, and Krishnagiri District was reviewed.</p> <p>Refer Annexure – IX.</p>
37.	It shall be ensured that there is no habitation is located within 500 meter radius from the periphery of the quarry site and also ensure that no hindrance will be caused to the people of the habitation located within 500m radius from the periphery of the quarry site	<p>Agreed to comply.</p> <p>It was observed that there is no human habitation within 300 m radius from the periphery of the quarry site as per the VAO certificate. The PP informed that no hindrance was occurred due to quarry activity and also agreed to ensure that no hindrance will be caused to the people of the habitation located within 500m radius from the periphery of the quarry site.</p> <p>Refer in Annexure – X.</p>
38.	Ground water quality monitoring should be conducted once in 3 Months.	<p>Agreed to comply.</p> <p>PP informed that the monitoring of ground water quality and level are being carried out at one location through external laboratory on quarterly</p>

S. No.	EC Conditions	Status of Compliance
		basis.
39.	Transportation of the quarried materials shall not cause any hindrance to the Village people/Existing Village road.	<p>Complied.</p> <p>The PP informed that the transportation of the quarried material was reportedly carried out in the covered truck and there was no hindrance to the village people and road.</p>
40.	Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI once in three months.	<p>Agreed to comply.</p> <p>The PP informed that free silica test was conducted and report was submitted to TNPCB and Department of Geology and Mining and IRO, MoEF&CC, Chennai as informed by PP.</p> <p>The report is enclosed in Annexure – XI.</p>
41.	Air sampling at intersection point should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI periodically once in six months.	<p>Complied.</p> <p>The PP has monitored the AAQ levels through NABL accredited laboratory to comply with the revised NAAQs norms. The report indicates that the AAQ levels are within the permissible limits.</p>
42.	Bunds to be provided at the boundary of the project site and it should be properly maintained.	<p>Complied.</p> <p>The PP has provided bunds at the boundary of the project site.</p>
43.	The project proponent shall undertake plantation/afforestation work by planting the native species on all side of the lease area at the rate of 400/Ha. Suitable tall tree samplings should be planted on the bunds and other suitable areas in and around the work place.	<p>Complied.</p> <p>The PP informed that the plantation activities are carried by planting the native species such as neem, Pungai, Coconut, Savukku tree etc., were planted around the quarry area during the mining operation.</p> <p>The PP Informed that more trees will be planted in future.</p> <p>Green belt Photos are enclosed in Annexure – XII.</p>

S. No.	EC Conditions	Status of Compliance
44.	At least 10 Neem trees should be planted around the boundary of the quarry site.	<p>Complied.</p> <p>During the visit, it was observed that they have planted more than 10 neem trees around the boundary of the quarry site.</p>
45.	Floor of excavated pit to be leveled and sides to be sloped with gentle slope (Except for granite quarries) in the mine closure phase.	<p>Agreed to comply.</p> <p>The PP has agreed to level the excavated pit and make gentle slope of the pit as per the mine closure plan.</p>
46.	The Project Proponent shall ensure a minimum of 2.5% of the annual turnover will be utilized for the CSR Activity	<p>Complied.</p> <p>The PP informed during the visit that an amount of Rs.15,200/- has been spent on CSR activities for Chinnamelpalli Govt. Higher School.</p> <p>Refer as Annexure – XIII.</p>
47.	The Project Proponent shall provide solar lighting system to the nearby villages.	<p>Agreed to comply.</p> <p>During the site inspection, PP has agreed to provide the solar lighting system to the nearby villages.</p>
48.	The Project Proponent shall comply with the mining and other relevant rules and regulations where ever applicable.	<p>Agreed to comply.</p> <p>The PP informed that the mining and other relevant rules and regulations wherever applicable are being complied.</p>
49.	Rainwater shall be pumped out Via Settling Tank only.	<p>Complied.</p> <p>Rainwater is pumped out via settling tank.</p>
50.	Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary shall be developed and maintained.	<p>Complied.</p> <p>Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary was developed and maintained.</p>
51.	As per MoEF&CC, Gol, Office Memorandum dated 30.03.2015, prior clearance from Forestry & Wild Life angle including clearance from obtaining committee of the National Board for Wild life as applicable shall be obtained	<p>Agreed to comply.</p> <p>The PP informed during the visit that Clearance from forestry and wild life angle is not applicable to them due to following:</p>

S. No.	EC Conditions	Status of Compliance
	before starting the quarrying operation, if the project site is located within 10KM from National Park and Sanctuaries.	<ul style="list-style-type: none"> • No forest land is involved in their lease area. • No wildlife sanctuary / critically polluted area / ecologically sensitive zone within 10km from the boundary of the ML area.
52.	The quarrying activity shall be stopped if the entire quantity indicated in the Mining plan is quarried even before the expiry of the quarry lease period and the same shall be monitored by the District Authorities.	<p>Agreed to comply.</p> <p>It was submitted that this condition is noted and assured to abide by this condition.</p>
53.	Safety equipments to be provided to all the employees.	<p>Complied.</p> <p>The PP has provided safety equipment's to all the employees during quarry operation.</p>
54.	Safety distance of 50m has to be provided in case of railway, reservoir, canal/odai.	<p>Agreed to comply.</p> <p>During the visit, it was observed that there is no railway line, reservoir, canal / odai within 50 m distance from the boundary of the lease area.</p>
55.	The Assistant / Deputy Director Department of Geology and Mining shall ensure that the proponent has engaged the blaster with valid Blasting license/certificate obtained from the competent authority before execution of mining lease.	<p>Complied.</p> <p>DGMS (Directorate General of Mines Safety) approved Mine's Manager and Mining Mate statutory personals are employed to carry over supervision and blasting operation.</p>
56.	The proponent shall furnish the Baseline data covering the Air, Water, Noise and land environment quality for the proposed quarry site before execution of mining lease.	<p>Complied.</p> <p>The PP has done the baseline study before mining operation.</p>
57.	The proponent shall erect the pillars in accordance with the Rules for depicting GPS details in earmarked boundary of the quarry site before execution of mining.	<p>Complied.</p> <p>During the visit, it was observed that pillars were erected according to the rules for depicting GPS details within the allotted boundary of the quarry site.</p>
58.	The proponent shall furnish the data obtained from the Public Works Department regarding the details of Ground Water table in the quarry site.	<p>Agreed to comply.</p> <p>It was submitted that this condition is noted and assured to abide by this condition.</p>

S. No.	EC Conditions	Status of Compliance
59.	The Proponent has to provide insurance protection to the workers in the case of existing mining or provide the affidavit in case of fresh lease before execution of mining lease.	<p>Complied.</p> <p>The Proponent has provided insurance protection to the workers.</p> <p>Refer as Annexure – XIV.</p>
60.	The proponent has to display the name board at the quarry site showing the details of Proponent, lease period, extent, etc., with respect to the existing activity before execution of mining.	<p>Complied.</p> <p>The Name board showing the details of the project was displayed on the front of the quarry site.</p> <p>Refer photos is in Annexure - XV.</p>
61.	Heavy earth equipment's if utilized, after getting approval from the competent authority.	<p>Complied.</p> <p>PP has obtained Heavy Earth Machinery (HEMM) permission from the Directorate General of Mines Safety.</p> <p>Refer as Annexure – XVI.</p>
62.	The environmental norms shall be monitor by the District Environmental Engineer, Tamil Nadu Pollution Control Board, Hosur.	<p>Agreed to comply.</p> <p>It was submitted that this condition is noted and assured to abide by this condition</p>
63.	The assistant Director Public Works Department, Ground water Division Dharmapuri shall monitor whether the quarrying activity is carried out above the ground water level on yearly basis.	<p>Agreed to comply.</p> <p>It was submitted that this condition is noted and assured to abide by this condition.</p>
64.	NOC for sanitary certificate shall be obtained from the Deputy Director of Health Services, Krishnagiri.	<p>Agreed to comply.</p> <p>The PP has not obtained NoC for sanitary certificate from the Deputy Director of Health services, Krishnagiri.</p>
65.	Yearly medical examination of the quarry workers should be fitted with registered medical practitioner and the report should be filed in the quarry office in as separate file and copy should be sent to the Deputy Director, Health Services, Krishnagiri.	<p>Complied.</p> <p>Yearly medical examinations of the workers are being carried out and records are maintained.</p> <p>The PP has agreed to send copy of the records to the Deputy Director, Health Services, Krishnagiri.</p>

S. No.	EC Conditions	Status of Compliance
66.	Closed circuit camera should be erected at the quarry site and the passage of vehicles in and out of the quarry should be recorded and the footage of recordings of the camera should be maintained and should be produced before the enforcing officials whenever called for.	Agreed to comply. Closed circuit camera was not erected at the quarry site
67.	Vehicles used for transportation of quarried materials should be fitted with GPS and monitored and vehicles should not carry the products more than the quantity allowed in the registration certificate.	Agreed to comply. Vehicles used for transportation of quarried materials has not fitted with GPS
68.	Pit mouth register should be maintained in on line.	Complied. Pit mouth register is maintained in online.
69.	Auditor report on the annual turnover amount should be submitted to the District Collector within one month from the end of the financial year.	Agreed to comply. Auditor report on the annual turnover amount was not submitted to the District Collector.
70.	02.5% of the turn over amount should be utilized for the CSR activity after consultation with the District Collector.	Refer below. Details were not made available.

GENERAL CONDITIONS:

S. No.	EC CONDITIONS	COMPLIANCE STATUS
1.	EC is given only on the factual records, documents and the commitment furnished in non-judicial stamp paper by the proponent.	Agreed to comply. It was submitted that this condition is noted and assured to abide by this condition.
2.	The Proponent shall obtain the Consent for Establishment from the TNPC Board before commencing the activity.	Refer below. The PP has not obtained Consent to Establishment (CTE) from TNPCB. However, the PP has obtained Consent to Operate (CTO) for Air vide proceedings

S. No.	EC CONDITIONS	COMPLIANCE STATUS
		<p>No.F.1681HSR/RS/DEE/TNPCB/HSR /A/2023 dated 06.05.2023 and Water vide proceeding No.F.1681HSR/RS/DEE/TNPCB/HSR /A/2023 dated 06.05.2023 from Tamil Nadu Pollution Control Board (TNPCB), Hosur and is valid up to 31.03.2023.</p> <p>Enclosed in Annexure – XVII.</p>
3.	No change in mining technology and scope of working should be made without prior approval of the SEIAA, Tamil Nadu.	<p>Complied.</p> <p>There is no change in mining technology and scope of working.</p>
4.	No change in the calendar plan including excavation, quantum of mineral (minor mineral) should be made.	<p>Complied.</p> <p>There is no change in the calendar plan including excavation & quantum of mineral (minor mineral) made.</p>
5.	Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	<p>Complied.</p> <p>The PP is carrying out the following pollution control measures.</p> <ul style="list-style-type: none"> • Water sprinkling carried out on haul roads at regular intervals by water sprinklers to control dust generation. • Periodic Monitoring of Ambient Air Quality (AAQ) and Noise level are being performed by a third party NABL accredited laboratory on half yearly basis. Monitoring Reports indicates that AAQ and Noise level are within the permissible limits.
6.	Effective safeguards shall be adopted against health risks on account of breeding of vectors in the water bodies created due to excavation of earth.	<p>Complied.</p> <p>There is no water body around this quarry. However the PP has taken vector controlled activities in the project area.</p>
7.	A berm shall be left from the boundary of adjoining field having a width equal to at least half the depth of proposed excavation.	<p>Complied.</p> <p>A berm haven been left from the boundary of adjoining field.</p>

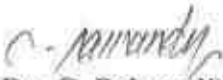
S. No.	EC CONDITIONS	COMPLIANCE STATUS
8.	Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.	<p>Complied.</p> <p>No dust extraction system is provided in the mineral handling area. However, the PP is carrying out water sprinkling activities to control the dust levels in the project area.</p>
9.	Vehicular emissions shall be kept under control and be regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.	<p>Complied.</p> <p>The PP informed that all the vehicles used in the project area having valid Pollution under Control (PUC) certificates. Regular maintenance of vehicles are being carried out. Further, the PP informed that mineral loaded vehicles are covered with tarpaulin and not over loaded.</p> <p>Refer as Annexure – XVIII.</p>
10.	Access and haul roads to the quarrying area should be restored in a mutually agreeable manner where these are considered unnecessary after extraction has been completed.	<p>Agreed to comply.</p> <p>It was submitted that this condition is noted and assured to abide by this condition.</p>
11.	All Personnel shall be provided with protective respiratory devices including safety shoes, Masks, gloves etc. Supervisory people should be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	<p>Complied.</p> <p>The PP has provided PPE such as safety shoes, masks, and gloves etc., given to the employees.</p> <p>Supervisory people have been provided with adequate training on safety and health aspects.</p> <p>The occupational health surveillance has been undertaken periodically as per the DGMS norms to observe any contradictions due to dust exposure. No abnormalities have been reported.</p>
12.	Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly. The workers shall be provided with personnel protective measures such as	<p>Complied.</p> <p>Regular medical examination of the workers is being carried out and records are maintained. The health checkup is being carried out as per the schedule drawn by them.</p>

S. No.	EC CONDITIONS	COMPLIANCE STATUS
	masks, gloves, boots etc.	Refer as Annexure – XIX.
13.	Workers/labourers shall be provided with facilities for drinking water and sanitation facility for Female and Male separately.	<p>Complied.</p> <p>The PP informed that workers were provided with safe drinking water and sanitation facilities for male and female separately.</p> <p>Refer in Annexure – XX.</p>
14.	The project proponent shall ensure that child labour is not employed in the project as per the sworn affidavit furnished.	<p>Complied.</p> <p>No child labour is employed at the project site as per PP.</p>
15.	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its Regional Office located at Chennai.	<p>Agreed to comply.</p> <p>The PP has earmarked an amount Rs.3,70,000/- for Environmental management purposes and it is being incurred. There is no separate account, maintained.</p> <p>The PP has agreed to submit the year wise EMP expenditure to the Integrated Regional Office (IRO), MoEF&CC, Chennai in future.</p>
16.	The Environmental Clearance does not absolve the applicant / proponent of his obligation / requirement to obtain other statutory and administrative clearances from other statutory and administrative authorities.	<p>Agreed to comply.</p> <p>It was submitted that this condition is noted and assured to abide by this condition.</p>
17.	This Environmental Clearance does not imply that the other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would be considering the project on merits and be taking decisions independently of the Environmental Clearance	<p>Agreed to comply.</p> <p>It was submitted that this condition is noted and assured to abide by this condition.</p>
18.	The DEIAA, Tamil Nadu may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.	<p>Agreed to comply.</p> <p>It was submitted that this condition is noted and assured to abide by this condition.</p>

S. No.	EC CONDITIONS	COMPLIANCE STATUS
19.	The DEIAA, Tamil Nadu may cancel the environmental clearance granted to this project under the provisions of EIA Notification, 2006, at any stage of the validity of this environmental clearance, if it is found or if it comes to the knowledge of this DEIAA, TN that the project proponent has deliberately concealed and/or submitted false or misleading information or inadequate data for obtaining the environmental clearance.	Agreed to comply. It was submitted that this condition is noted and assured to abide by this condition.
20.	Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.	Agreed to comply. In general the PP implementing all the conditions given in the EC.
21.	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability Insurance Act, 1991, along with their amendments, draft Minor Mineral Conservation & Development Rules, 2010 framed under MMDR Act 1957, National Commission for protection of Child Right Rules, 2006 and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/Hon'ble High Court of Madras and any other Courts of Law relating to the subject matter.	Agreed to comply. The consents are valid up to 29.05.2023 . The PP stated that Public Liability Insurance Act, 1991, along with their amendments are complied. However, no details were made available regarding required insurance. Minor mineral conservation & development rules, 2010 framed under MMDR Act, 1957, National Commission for Protection of Child Right Rules, 2006 and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/Hon'ble High Court of Madras and any other courts of Law relating to the subject matter are also being complied as informed.
22.	Any other conditions stipulated by other Statutory/Government authorities shall be complied.	Agreed to comply. It was submitted that this condition is noted and assured to abide by this condition.
23.	Any appeal against this environmental clearance shall lie with the Hon'ble National Green Tribunal, if preferred, within a period of	Complied. The PP informed that there is no appeal lying with National Green Tribunal

S. No.	EC CONDITIONS	COMPLIANCE STATUS
	30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	(NGT) against this Environmental Clearance as on date.

This has the approval of the Competent Authority vide diary No. ⁵⁶⁸.....dated ^{28.07.2023}.....


(Dr. C. Palpandi)
Scientist 'D'

Dr. C. Palpandi,
 Scientist "D"
 Government of India
 Min. of Environment Forest and Climate Change
 Integrated Regional Office
 1st Floor, Additional Office Block for GPOA,
 Shastri Bhawan, Haddows Road
 Nungambaldam, Chennai - 600 006.

PHOTOS OF WIRE FENCING



PHOTOS OF FIRST AID BOX



Cert No. FRE /5492



भारत सरकार/Government of India

खान अधिनियम, 1952/Mines Act, 1952

खनन परीक्षा बोर्ड/Board of Mining Examinations

फोरमैन सक्षमता प्रमाण-पत्र

FOREMAN'S CERTIFICATE OF COMPETENCY

(केवल ओपनकास्ट खानों तक सीमित)

(Restricted to mines having opencast working only)

(धात्विकीय खान विनियम, 1961 के अन्तर्गत)

(Under the Metalliferous Mines Regulations, 1961)

श्री कुमारेसन स सुपुत्र शक्तिवेल रा

जिनकी जन्म तिथि 23.01.1998 है, को विहित अर्हताएं एवं अनुभव प्राप्त करने का संतोषजनक प्रमाण प्रस्तुत करने पर एतद्वारा केवल ओपनकास्ट धात्विकीय खानों के लिए फोरमैन सक्षमता प्रमाण-पत्र प्रदान किया जाता है। यह प्रमाण-पत्र दिनांक 13 अक्टूबर 2022 से प्रभावी है।

Shri KUMARESAN S son of SAKTHIVEL R
 born on 23 JANUARY 1998 having given satisfactory evidence of possessing the prescribed qualifications and experience is hereby granted FORMAN'S CERTIFICATE OF COMPETENCY for metalliferous mine having opencast workings only. This certificate is effective from 13.10.2022

सचिव

खनन परीक्षा बोर्ड
 Secretary
 Board of Mining
 Examinations

अध्यक्ष

खनन परीक्षा बोर्ड
 Chairman
 Board of Mining
 Examinations

Signed and Sealed
 Date 03.05.2023

FRE

To

KUMARESAN S

Home Address

Village **NEYVELI**
PO **NEYVELI**
Police Station **VADAKUTHU (NEYVELI)**
District **CUDDALORE**
State **TAMILNADU**
607801

प्रमाणित किया जाता है कि इनकी संक्षम चिकित्सा अधिकारी द्वारा स्वास्थ्य परीक्षा कर
खान में कार्य करने के लिए स्वस्थ घोषित किया जाता है।

Certified that he has been examined by qualified medical
officer and declared fit for employment in mines.

1 _____ को 2 _____ को
On On

3 _____ को 4 _____ को
On On

5 _____ को 6 _____ को
On On

7 _____ को 8 _____ को
On On

9 _____ को 10 _____ को
On On

Prepared by

Checked by

[Signature]
[Signature]



தமிழ்நாடு தமில்நாடு TAMIL NADU

12.12.2018
 Sri Devarajaa M Sand
 B.L.C.

50AB 650305

B.M. MUNIRAJ
 B.V.Lc: 7353/83
 Krishnagiri, Tamilnadu

Deed of Agreement

This agreement entered into at Kothapetta Village on the day of 12th December 2018. Between Sri Velava Minings (Occupier : C. Kirubashankaran), Door No.5/77F2, Rajaji Nagar, Mathaiyankuttai, Mettur Taluk, Salem Dist, Tamilnadu. Pin - 636 401.

Herein after referred to as party of the first part. And

Leese Address:
M/s. Sri Devaraajaa M Sand
 Partner : D Mathiazhagan
 No. 58B, Gandhi Nagar,
 Krishnagiri Town and Taluk

Site Address:
 Partner: D Matrhiashagan
M/s. Sri Devaraajaa M Sand
 SF No.78/1A (Part),
 Kothapetta Village,
 Krishnagiri Tk, Krishnagiri Dt.

Herein after referred to as party of the second part

Party of First
[Signature]

Party of Second
[Signature]

Whereas, in the above terms First party and Second Part shall mean and include wherever the context so permits, their legal heir, successors, representatives, administrators and assigns etc.

Whereas the party of the second part has obtained Quarry Lease for carrying out Quarrying and Carrying away of minor minerals, referred in the Survey No.78/1A(Part) (1.75.00) and 78/1B (part)(2.25.00), Extent in 4.00.00 Hectares in Kothapetta Village in the Sub Registration Krishnagiri, Krishnagiri District from Government of Tamilnadu under lease agreement registered with the sub-registrar in Krishnagiri as M/s. Sri Devarajaa M Sand Partner Shri D. Mathiazhagan S/o K.M Devaraj

Whereas the party of the second part having his own Mines Manager, Foreman and Blaster requires explosive materials for doing blasting in the said quarry. For possession of the explosive materials, a license under the Indian Explosives Act and Indian Explosive Rules, 2008 issued by the competent authority is necessary and the party of the first part is having a valid explosive License No. **E/SC/TN/22/732 (E104893)** issued by Joint Controller of Explosives, Chennai and Magazines at Survey No 737/1B, 737/2B Maniyathahalli Village, Purikal Post Nallampalli Police Station Dharmapuri District, Tamilnadu- 636 401 and they are authorized and entitles to make, supply and use of explosives for blasting rocks in Quarries.

The party of the second part approached the party of the first part to assist him in extraction of minor minerals from the said leased quarry by providing required explosive materials as and when required under the license issued to him by the competent authority and the party of the first part having agreed to do so.

The lease period of Five years starts from **31st of May 2018** and ends on the **30th May of 2023**

Now the agreement witness as follows:

1. It is agreed that the party of the first part shall supply explosives to the party of the second part, under his license for the blasting of rocks in the aforesaid licensed quarry, as per the provisions of Mines Act 1952.
2. The second party shall place the requirement of explosives and accessories, depending on the site requirements, holes drilled etc., and

Party of First



Party Of Second



the explosives will be used by Competent Mining Personnel's / authority like Mines Managers, Mines Foreman, Mines Mate, Blaster etc. appointed by the owner as per the provisions of Mines Act 1952. After completion of the blasting operation by the competent personnel, left out or unused explosives will be returned to the magazine on the same day from where the supply was effected.

3. The party of the Second part is solely responsible for using the explosives and accessories in the leased area and Survey Nos. where mining lease has been obtained. The responsibility of the first party ceases once the explosives are delivered at the site. The Mine owner shall appoint competent Mining Personnel's for carrying out Mining & Quarrying operations including blasting operations in the quarry as per the provisions of the Mines Act 1952. The explosives will be used and handled by Mines Mate, Blaster, Mines Foreman and Mines Manager appointed by the Mine owner and all safety aspects will be scrupulously followed by the competent persons as per the provisions of the Mines Act 1952 and Explosives Rules 2008.
4. The party of the first part will charge GST, as per the GST act and the second party will pay the GST amount as per the bills. The bill's will be settled promptly on fortnight basis by Ch. NEFT/RTGS, by the party of the second part as mutually agreed.
5. This agreement shall be in force until the expiry of the license of the first party from the date of this agreement and is subjected to renewal of such terms and conditions, as may be mutually agreed upon.

In witnesses the parties herein have set their hands to this agreement on this day month and year first mentioned above in the presence of the following.

Place: **Kothapetta** Village.

Date 12.12.2018.

Party of First

Witness:

Party of Second

① R. Jasuraj Prabhakaran

② Y. Shabirany

आयुक्त निदेशक, सुरक्षा विभाग, दिल्ली
 Director, Security Department, Delhi



भारतीय सुरक्षा विभाग
 LICENCE ENTITLED TO
 Possession, Carriage, Use, Storage, Sale, Manufacture, Transport, Distribution, and Disposal of Explosives

1. Licensee's Name (Name of the Licensee)
 M/s. V. S. Enterprises (Pvt.) Ltd., 1/1, Connaught Place, New Delhi-110028

2. Nature of License (Nature of the License)
 Licence for possession, carriage, use, storage, sale, manufacture, transport, distribution, and disposal of explosives for the purpose of...

3. Licensee's Address (Address of the Licensee)
 1/1, Connaught Place, New Delhi-110028

S. No.	Description	Quantity	Value	Remarks
1	Explosives	500	10000	
2	Explosives	500	10000	
3	Explosives	500	10000	
4	Explosives	500	10000	
5	Explosives	500	10000	
6	Explosives	500	10000	

4. Licensee's Name (Name of the Licensee)
 M/s. V. S. Enterprises (Pvt.) Ltd., 1/1, Connaught Place, New Delhi-110028

5. Licensee's Name (Name of the Licensee)
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21. Licensee's Name (Name of the Licensee)
 M/s. V. S. Enterprises (Pvt.) Ltd., 1/1, Connaught Place, New Delhi-110028

22. Licensee's Name (Name of the Licensee)
 M/s. V. S. Enterprises (Pvt.) Ltd., 1/1, Connaught Place, New Delhi-110028

23. Licensee's Name (Name of the Licensee)
 M/s. V. S. Enterprises (Pvt.) Ltd., 1/1, Connaught Place, New Delhi-110028

24. Licensee's Name (Name of the Licensee)
 M/s. V. S. Enterprises (Pvt.) Ltd., 1/1, Connaught Place, New Delhi-110028

Signature of the Director, Security Department, Delhi
 Director of Explosives, South Circle, Chennai

Space for Endorsement of Renewal

Date of Issue

Date of Issue

Signature of the Licensee

Condition of License: The licensee shall be bound to comply with the provisions of the Act and Rules framed thereunder and the conditions of this license as set forth under Section VIII, wherever applicable, and to maintain the premises and apparatus used for the purpose of the license in a safe and sound condition.

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TEST REPORT

Report Number: GLCS/TR/1717/2021-22

Report Date: 24.02.2022

Issued To : Sri Devaraajaa 'M' Sand No. 58B Gandhi Nagar, Krishnagiri Town and District		Site Address: Rough Stone Quarry, Lease Area - 4.00.0 Ha, S.F.No. 78/1A (P) & 78/1B (P), Kothabettu Village, Krishnagiri Taluk, Krishnagiri District.	
Attention	-	Sampling condition	Good - Ambient
Customer Ref.No.	TRF No. 533	Sample Drawn by	Laboratory
Sample Name	Vibration Monitoring	Sampling Method	GLCS/SOP/V/024
Description of Sample	Ground Vibration Monitoring	Sample Code	GLCS / 1717
Sampling Hours	01.00 pm	Sample Analyzed on	17.02.2022
Sampling date	16.02.2022	Sample Completed on	23.02.2022
Sample Received on	17.02.2022		

S. No	DETAILS OF MONITORING	UNITS	RESULT
1	Direction from blasting location	-	Southeast
2	Distance	m	300
3	Bench Height	ft	7
4	Diameter of Hole	mm	30
5	Depth of Hole	mm	15
6	Number of Holes	-	40
7	Average Burden	m	1.0
8	Type of Explosives	-	Slurry
9	Maximum Charge / Day	Kg/day	20
10	Peak Particle Velocity (PPV) mm/s	mm/s	2.04
	OGMS - Directorate General of Mine Safety Maximum Permissible Limit of PPV	mm/s	5

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*****End of Report*****

Page 1 of 1

Authorised Signatory

S. MURUGESAN
Quality Manager



GLOBAL LAB AND CONSULTANCY SERVICES

(An ISO 17025:2017 / NABL accredited & FSSAI notified Laboratory)

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TEST REPORT

Report Number: GLCS/TR/3696/2022-23

Report Date: 19.09.2022

Issued To : Sri Devarajaa 'M' Sand No.58B Gandhi Nagar, Krishnagiri Town and District .		Site Address: Rough Stone Quarry, Lease Area -4.00.0 Ha, S.F.No.78/1A (Part) and 78/1B , Kothabetta Village, Krishnagiri Taluk , Krishnagiri District.	
Attention	-	Sampling Condition	Good - Active
Customer Ref.No.	TRF No : 1251	Sampled by	Laboratory
Sample Name	Air Quality Monitoring	Sampling Method	GLCS/SOP/AAQ/015
Sample Description	Ambient Air Quality	Sample Code	GLCS / 3696
Location Name	AAQ1- Core Zone (South West Corner of Quarry)	Date of Analysis	14.09.2022
Sampling Hours	09.00 am - 05.00pm	Date of Completion	19.09.2022
Sampling Date	13.09.2022	Avg Temperature	31.4°C
Sample Receipt Date	14.09.2022	Avg Humidity	64.8%
Discipline	Chemical	Group	Atmospheric Pollution

Sl. NO.	TEST PARAMETER	TEST METHOD	UNITS	RESULT	NAAQ (2009)* LIMITS
1	Particulate matter (Size less than 10 µm/PM ₁₀)	IS 5182 Part23:2007 (RA 2017)	µg/m ³	62.5	100
2	Particulate matter (Size less than 2.5 µm/PM _{2.5})	GLCS/SOP/AAQ/017	µg/m ³	20.8	60
3	Sulphur dioxide as SO ₂	IS 5182 Part2: 2001(RA 2007)	µg/m ³	BDL(DL:8.0)	80
4	Nitrogen dioxide as NO ₂	IS 5182 Part6: 2007(RA 2007)	µg/m ³	18.6	80
5	Ozone as O ₃	GLCS/SOP/AAQ/002	µg/m ³	BDL(DL:5.0)	180
6	Ammonia as NH ₃	GLCS/SOP/AAQ/001	µg/m ³	BDL(DL:5.0)	400
7	Carbon Monoxide as CO	IS 5182 Part10:1999 (RA 2009)	mg/m ³	BDL(DL:1.0)	4.0
8	Lead as Pb	IS 5182 Part22:2004 (RA 2009)	µg/m ³	BDL(DL:0.01)	1.0
9	Benzene as C ₆ H ₆	IS 5182 Part11:2007	µg/m ³	BDL(DL:1.0)	5.0
10	Benzo(a)Pyrene as BaP	IS 5182 Part07:2004	ng/m ³	BDL(DL:0.1)	1.0
11	Arsenic as As	IS 5182 Part22:2004 (RA 2009)	ng/m ³	BDL(DL:1.0)	6.0
12	Nickel as Ni	IS 5182 Part22:2004 (RA 2009)	ng/m ³	BDL(DL:1.0)	20

Note: BDL- Below Detection Limit, DL- Detection Limit

* NAAQS - National Ambient Air Quality Standard Issued by CPCB (Central Pollution Control Board) in 2009.

[Signature]
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Page 1 of 1

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[Signature]
Authorised Signatory
L. SUDHAPRIYA
Technical Manager

Note: The test results are only to the sample submitted for test. Any Correction of the test report on full or part shall invalidate the report. Samples are not drawn by us unless otherwise stated. Sample will be retained for 14 days from the date of reporting except in case of regulatory samples or specifically instructed by client. Perishable samples will be discarded immediately after reporting. We do not accept any liability with regard to origin or source from which the samples are extracted. The Laboratory is not responsible for authenticity of photocopied test reports. Any holder of this report is advised that information contained herein reflects the laboratory's finding at the time of its intervention only and within the limits of client instructions. The authenticity of the test report issued by us can be verified by submitting an E-mail request with report number and report date along with report copy.

BRANCH OFFICES: HOSUR (Mobile : 70944 54645) & COIMBATORE (Mobile : 70944 54646)

TEST REPORT

Report Number: GLCS/TR/3697/2022-23

Report Date: 19.09.2022

Issued To : Sri Devaraajaa 'M' Sand No.58B Gandhi Nagar, Krishnagiri Town and District .		Site Address: Rough Stone Quarry, Lease Area -4.00.0 Ha, S.F.No.78/1A (Part) and 78/1B , Kothabetta Village, Krishnagiri Taluk , Krishnagiri District.	
Attention	-	Sampling Condition	Good - Active
Customer Ref.No.	TRF No : 1251	Sampled by	Laboratory
Sample Name	Air Quality Monitoring	Sampling Method	GLCS/SOP/AAQ/015
Sample Description	Ambient Air Quality	Sample Code	GLCS / 3697
Location Name	AAQ2- Core Zone (South East Corner of Quarry)	Date of Analysis	14.09.2022
Sampling Hours	09.25am - 05.25 pm	Date of Completion	19.09.2022
Sampling Date	13.09.2022	Avg Temperature	31.7°C
Sample Receipt Date	14.09.2022	Avg Humidity	65.4%
Discipline	Chemical	Group	Atmospheric Pollution

Sl. NO.	TEST PARAMETER	TEST METHOD	UNITS	RESULT	NAAQ (2009)* LIMITS
1	Particulate matter (Size less than 10 µm/PM ₁₀)	IS 5182 Part23:2007 (RA 2017)	µg/m ³	57.8	100
2	Particulate matter (Size less than 2.5 µm/PM _{2.5})	GLCS/SOP/AAQ/017	µg/m ³	23.3	60
3	Sulphur dioxide as SO ₂	IS 5182 Part2: 2001(RA 2007)	µg/m ³	11.4	80
4	Nitrogen dioxide as NO ₂	IS 5182 Part:6: 2007(RA 2007)	µg/m ³	19.2	80
5	Ozone as O ₃	GLCS/SOP/AAQ/002	µg/m ³	BDL(DL:5.0)	180
6	Ammonia as NH ₃	GLCS/SOP/AAQ/001	µg/m ³	BDL(DL:5.0)	400
7	Carbon Monoxide as CO	IS 5182 Part10:1999 (RA 2009)	mg/m ³	BDL(DL:1.0)	4.0
8	Lead as Pb	IS 5182 Part22:2004 (RA 2009)	µg/m ³	BDL(DL:0.01)	1.0
9	Benzene as C ₆ H ₆	IS 5182 Part11:2007	µg/m ³	BDL(DL:1.0)	5.0
10	Benzo(a)Pyrene as BaP	IS 5182 Part07:2004	ng/m ³	BDL(DL:0.1)	1.0
11	Arsenic as As	IS 5182 Part22:2004 (RA 2009)	ng/m ³	BDL(DL:1.0)	6.0
12	Nickel as Ni	IS 5182 Part22:2004 (RA 2009)	ng/m ³	BDL(DL:1.0)	20

Note: BDL- Below Detection Limit; DL- Defection Limit

* NAAQS - National Ambient Air Quality Standard Issued by CPCB (Central Pollution Control Board) in 2009.

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Technical Manager

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Web: www.glcs.in

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TEST REPORT

Report Number: GLCS/TR/3698/2022-23

Report Date: 19.09.2022

Issued To : Sri Devarajaa 'M' Sand No.58B Gandhi Nagar, Krishnagiri Town and District .		Site Address: Rough Stone Quarry, Lease Area -4.00.0 Ha, S.F.No.78/1A (Part) and 78/1B , Kothabetta Village, Krishnagiri Taluk , Krishnagiri District.	
Attention	-	Sampling Condition	Good - Active
Customer Ref.No.	TRF No : 1251	Sampled by	Laboratory
Sample Name	Air Quality Monitoring	Sampling Method	GLCS/SOP/AAQ/015
Sample Description	Ambient Air Quality	Sample Code	GLCS / 3698
Location Name	AAQ3- Core Zone (North East Corner of Quarry)	Date of Analysis	14.09.2022
Sampling Hours	10.00 am - 06.00pm	Date of Completion	19.09.2022
Sampling Date	13.09.2022	Avg Temperature	33.5°C
Sample Receipt Date	14.09.2022	Avg Humidity	64.7%
Discipline	Chemical	Group	Atmospheric Pollution

Sl. NO.	TEST PARAMETER	TEST METHOD	UNITS	RESULT	NAAQ (2009)* LIMITS
1	Particulate matter (Size less than 10 µm/PM ₁₀)	IS 5182 Part23:2007 (RA 2017)	µg/m ³	59.6	100
2	Particulate matter (Size less than 2.5 µm/PM _{2.5})	GLCS/SOP/AAQ/017	µg/m ³	23.2	60
3	Sulphur dioxide as SO ₂	IS 5182 Part2: 2001(RA 2007)	µg/m ³	BDL(DL:8.0)	80
4	Nitrogen dioxide as NO ₂	IS 5182 Part:6: 2007(RA 2007)	µg/m ³	19.5	80
5	Ozone as O ₃	GLCS/SOP/AAQ/002	µg/m ³	BDL(DL:5.0)	180
6	Ammonia as NH ₃	GLCS/SOP/AAQ/001	µg/m ³	BDL(DL:5.0)	400
7	Carbon Monoxide as CO	IS 5182 Part10:1999 (RA 2009)	mg/m ³	BDL(DL:1.0)	4.0
8	Lead as Pb	IS 5182 Part22:2004 (RA 2009)	µg/m ³	BDL(DL:0.01)	1.0
9	Benzene as C ₆ H ₆	IS 5182 Part11:2007	µg/m ³	BDL(DL:1.0)	5.0
10	Benzo(a)Pyrene as BaP	IS 5182 Part07:2004	ng/m ³	BDL(DL:0.1)	1.0
11	Arsenic as As	IS 5182 Part22:2004 (RA 2009)	ng/m ³	BDL(DL:1.0)	6.0
12	Nickel as Ni	IS 5182 Part22:2004 (RA 2009)	ng/m ³	BDL(DL:1.0)	20

Note: BDL- Below Detection Limit; DL- Detection Limit

* NAAQS - National Ambient Air Quality Standard Issued by CPCB (Central Pollution Control Board) in 2009.

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Technical Manager

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BRANCH OFFICES: HOSUR (Mobile : 70944 54645) & COIMBATORE (Mobile : 70944 54646)



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TEST REPORT

Report Number: GLCS/TR/3701/2022-23

Report Date: 19.09.2022

Issued To : Sri Devaraajaa 'M' Sand No.58B Gandhi Nagar, Krishnagiri Town and District .		Site Address: Rough Stone Quarry, Lease Area -4.00.0 Ha, S.F.No.78/1A (Part) and 78/1B, Kothabetta Village, Krishnagiri Taluk , Krishnagiri District.	
Attention	-	Sampling condition	Good - Ambient
Customer Ref. No.	TRF No : 1251	Sampled by	Laboratory
Sample Name	Noise Level Monitoring	Sampling Method	GLCS/SOP/N/014
Sample description	Sound Pressure Level	Sample Code	GLCS / 3701- 3704
Sampling Hours	11.30 am - 02.30 pm	Date of Analysis	14.09.2022
Sampling Date	13.09.2022	Date of Completion	19.09.2022
Sample Receipt Date	14.09.2022		

Sl. No.	Location	Results in dB (A)
		Day time
Ambient Noise Core Zone		
1	Southwest Corner of Quarry	51.5
2	Northwest Corner of Quarry	49.8
3	Northeast Corner of Quarry	52.5
4	Southeast Corner of Quarry	51.7
Limits as per The Noise Pollution (Regulation & Control) Rules, 2010 of MoEFCC / CPCB (Industrial)		Day Time : 75 dB (A)
		Night Time : 70 dB (A)

Note: MoEFCC - Ministry of Environment Forest and Climate Change;
CPCB - Central Pollution Control Board

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****End of Report****
Page 1 of 1

Authorised Signatory
L. SUDHAPRIYA
Technical Manager

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TEST REPORT

Report Number: GLCS/TR/3702/2022-23

Report Date: 19.09.2022

Issued To : Sri Devaraajaa 'M' Sand No.58B Gandhi Nagar, Krishnagiri Town and District .		Site Address: Rough Stone Quarry, Lease Area -4.00.0 Ha, S.F.No.78/1A (Part) and 78/1B , Koihabetta Village, Krishnagiri Taluk , Krishnagiri District.	
Attention	-	Sampling condition	Good - Ambient
Customer Ref. No.	TRF No : 1251	Sampled by	Laboratory
Sample Name	Noise Level Monitoring	Sampling Method	GLCS/SOP/N/014
Sample description	Work Place Noise	Sample Code	GLCS / 3705-3708
Sampling Hours	11.30 am - 02.30 pm	Date of Analysis	14.09.2022
Sampling Date	13.09.2022	Date of Completion	19.09.2022
Sample Receipt Date	14.09.2022		

Sl. No.	Location	Results in dB (A)
		Day time
1	Excavator Operating Area - 1	73.5
2	Compressor Area	73.4
3	Excavator Operating Area - 2	72.9
4	Loader Operating Area	70.8
Limits as per The Noise Pollution (Regulation & Control) Rules, 2010 of MoEFCC / CPCB (Industrial)		Day Time : 75 dB (A)
		Night Time : 70 dB (A)

Note: MoEFCC - Ministry of Environment Forest and Climate Change;
CPCB - Central Pollution Control Board

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Technical Manager

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BRANCH OFFICES: HOSUR (Mobile : 70944 54645) & COIMBATORE (Mobile : 70944 54646)



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TEST REPORT

Report Number: GLCS/TR/3703/2022-23

Report Date: 19.09.2022

Issued To : Sri Devaraajaa 'M' Sand No.58B Gandhi Nagar, Krishnagiri Town and District.		Site Address: Rough Stone Quarry, Lease Area -4.00.0 Ha, S.F.No.78/1A (Part) and 78/1B Kothabetta Village, Krishnagiri Taluk, Krishnagiri District.	
Attention	-	Sample Receipt Condition	Good - Active
Customer Ref No	TRF No: 1251	Sample Quantity	2 Litres
Sample Name	Borewell Water	Sampled by	Laboratory
Sample Description	Liquid	Sampling Method	GLCS/SOP/W/028
Sample Code	GLCS / 3709	Date of Analysis	14.09.2022
Sampling date	13.09.2022	Date of Completion	19.09.2022
Sample Receipt Date	14.09.2022	Group	Water
Discipline	Chemical		

Sl. No.	TEST PARAMETERS	TEST METHOD	UNIT	RESULTS	IS 10500:2012 Drinking Water	
					Acceptance Limit	Permissible Limit
1	Color	IS 3025 PART 4	Hazen	<5	5	15
2	Odor	IS 3025 PART 5	-	Agreeable	Agreeable	Agreeable
3	Taste	IS 3025 PART 7	-	Agreeable	Agreeable	Agreeable
4	pH	IS 3025 PART11	-	7.58	6.5 - 8.5	No Relaxation
5	Electrical Conductivity	IS 3025 PART14	µS/cm	1504	-	-
6	Turbidity	IS 3025 PART10	NTU	<1	1	5
7	Total Dissolved Solids	IS 3025 PART16	mg/l	963	500	2000
8	Total Solids	IS 3025 PART15	mg/l	965	-	-
9	Total Suspended Solids	IS 3025 PART17	mg/l	<2	-	-
10	P. Alkalinity	IS 3025 PART 23	mg/l	Nil	-	-
11	Total Alkalinity	IS 3025 PART 23	mg/l	148	200	600
12	Total Hardness as CaCO ₃	IS 3025 PART 21	mg/l	140	200	600
13	Calcium as Ca	IS 3025 PART40	mg/l	28.8	75	200
14	Magnesium as Mg	IS 3025 PART 46	mg/l	16.6	30	100
15	Chloride as Cl ⁻	IS 3025 PART 32	mg/l	78.2	250	1000

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L. SUDHAPRIYA
Technical Manager

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BRANCH OFFICES: HOSUR (Mobile : 70944 54645) & COIMBATORE (Mobile : 70944 54646)

TEST REPORT

Report Number: GLCS/TR/3703/2022-23

Report Date: 19.09.2022

Sl. No.	TEST PARAMETERS	TEST METHOD	UNIT	RESULTS	IS 10500:2012 Drinking Water	
					Acceptance Limit	Permissible Limit
16.	Sulphate as SO ₄	IS 3025 PART 24	mg/l	16.2	200	400
17.	Iron as Fe	IS 3025 PART 53	mg/l	BDL(DL:0.1)	0.3	No Relaxation
18.	Sodium as Na	IS 3025 PART 45	mg/l	74.5	-	-
19.	Potassium as k	IS 3025 PART 45	mg/l	9.3	-	-
20.	Acidity as CaCO ₃	IS 3025 PART 22	mg/l	NIL	-	-
21.	Ammoniacal Nitrogen as NH ₃ -N	IS 3025 Part 34	mg/l	BDL(DL:1)	0.5	No Relaxation
22.	Total Kjeldahl Nitrogen	IS 3025 Part 34	mg/l	BDL(DL:2)	-	-
23.	Boron as B	IS 3025 Part 57	mg/l	BDL(DL:0.01)	0.5	1
24.	Free Residual Chlorine as Cl ₂	IS 3025 PART 26	mg/l	BDL(DL:1)	1	1.5
25.	Fluoride as F	GLCS/SOP/W/015	mg/l	0.45	1	1.5
26.	Silica as Si	IS 3025 PART 35	mg/l	13.5	-	-
27.	Free Carbon Dioxide CO ₂	IS 3025 Part 61	mg/l	BDL(DL:1)	-	-
28.	Manganese as Mn	IS 3025 Part 59	mg/l	BDL(DL:0.1)	0.1	0.3
29.	Phosphate as PO ₄	IS 3025 PART 31	mg/l	BDL (DL:0.1)	--	--
30.	Carbonate	IS 3025 Part 51	mg/l	Nil	-	-
31.	Bicarbonate	IS 3025 Part 51	mg/l	148	-	-
32.	Nitrate as NO ₃	IS 3025 Part 34	mg/l	BDL (DL:2)	45	No Relaxation
33.	*Escherichia Coli	IS 1622 : 1981	MPN/100ml	Absent	Should be Absent	
34.	*Coliform Bacteria	IS 1622 : 1981	MPN/100ml	Absent		

Note:BDL- Below Detection Limit, DL- Detection Limit, MPN – Most probable number

*These Parameters were Sub-Contracted to MoEF Laboratory

For Global Lab and Consultancy Services

Prepared



Verified

*****End of Report*****

Page 2 of 2

Authorised Signatory

L. SUDHAPRIYA
Technical Manager

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From

Dr. S.Vediappan, M.Sc., Ph.d.,
Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

To

M/s. Sri Devaraajaa M Sand,
D.no. 58B, Gandhi Nagar,
Krishnagiri Town,
Krishnagiri - 635 001.

Roc.No.1121/2020/Mines Dated: .02.2023

Sir,

Sub: Mines and Minerals - Rough stone - Krishnagiri District - Krishnagiri Taluk - Kothapetta Village-patta land in S.F.No. 78/1A(P) & 78/1B(P) Over an extent of 4.00.00 Hects - Quarry lease granted to M/s. Sri Devaraajaa M Sand - Scheme of mining submitted - approved - Other quarry situated in 500 mtrs radial distance - Details furnished - reg.

Ref:

1. The District Collector, Krishnagiri Proc.Roc.No.418/2017/ Mines Dated: 31.05.2018.
2. Mining Plan approved by the Deputy Director of Geology and Mining, Krishnagiri in Rc.no. 418/2017/Mines dated: 29.12.2017.
3. 1st Scheme of Mining plan approved by Deputy Director of Geology and Mining, Krishnagiri in Rc.no. 1121/2020/Mines dated: 27.01.2023.
4. Assistant Director Geology and Mining, Krishnagiri Proc. Rc.no. 1121/2020/mines dated: 26.04.2021.
5. M/s. Sri Devaraajaa M Sand, Gandhi Nagar, Krishnagiri letter dated: 09.02.2023.

Kind attention is invited to the references cited above.

2. A quarry lease had been granted in favour of M/s. Sri Devaraajaa M Sand, to quarry Rough stone for a period of 10 years over an extent of 4.00.00 hecets of Patta land in S.F.No. 78/1A(P) & 78/1B(P) of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District vide the District Collector, Krishnagiri Proc.Roc.No.418/2017/Mines dated: 31.05.2018 and Assistant Director Geology and Mining Proc. Rc.No. 1121/2020/Mines dated: 26.04.2021 under TNMMCR Rules 1959. The lease deed has been executed on 31.05.2018 and the lease period is valid upto 30.05.2028.

3. The Mining plan for the subject Rough stone quarry was approved by the Deputy Director of Geology and Mining, vide letter Rc. No. 418/2017/Mines Dated: 29.12.2017.

4. The lessee has submitted 1st Scheme of mining for the 2nd five years which was approved by the Deputy Director of Geology and Mining, Krishnagiri vide letter dated: 27.01.2023.

5. In this connection, the details of quarries situated within 500mts for the subject quarry requested by the lessee vide letter dated: 09.02.2023 to furnish the same before SELAA in orders to get Environmental Clearance

I. Details of Existing quarries.

Sl No.	Name of the lessee	Village & Taluk	Mineral	S.F No.	Extent in Hect	GO No.& Date	Lease period.
1.	M/S. Devarajaa M.Sand, No. 58 B Gandhi Nagar, Krishnagiri	Krishnagiri, Kothapetta	Rough Stone	78/1A(P) & 78/1B(P)	4.00.00	Rc.No. 418/2018/ Mines dated 30.05.2018	31.05.2018 to 30.05.2028 Instant Proposal (proposed for 2 nd five year)
2.	Tmt. K.M. Vijaya, W/o. D. Madhiazhagan, D.No. 58B, Gandhi Nagar, Krishnagiri Town, Krishnagiri	Krishnagiri, Kothapetta	Rough Stone	78/1B(P)	4.00.00	Rc.No. 419/2017/ Mines dated 30.05.2018	31.05.2018 to 30.05.2028
3.	M/s. Ma Quality stone, 58B Gandhi Nagar	Krishnagiri, Kothapetta	Rough Stone	87/1B2(P)	3.70.00	Rc.No. 1179/2020 mines date: 23.11.2022	23.11.2022 to 22.11.2032

II. Details of abandoned/Old quarries.

Sl No.	Name of the lessee	Village & Taluk	Mineral	S.F No.	Extent in Hect	GO No.& Date	Lease period.
1.	Thiru. Ganesan	Krishnagiri, Kothapetta	Rough Stone	56/1(P-D)	2.54.00	Rc.No. 611/2009/ Mines dated 14.05.2015	14.05.2015 to 13.05.2020
2.	Tmt. Sa. Sumitha Shankar, W/o Shankar Raj, 252, Metbanda Village, Venkatapur am Panchayat, Krishnagiri	Krishnagiri, Kothapetta	Rough Stone	56/1 (P-5)	1.20.00	Rc.No. 49/2016/ Mines dated 18.08.2016	1.09.2016 to 31.08.2021

No. 1 by

3.	Tmt. QUMMURUNNISA	Krishnagiri, Kothapetta	Rough Stone	87/1B1(P) & 87/1B2(P)	4.75.00	Re.No. 08/2023/ mines date: 05.02.2016	02.03.2016 to 01.05.2021
4.	Thiru. A. Madeshi	Krishnagiri, Kothapetta	Rough Stone	56/1(P.C)	3.06.00	Re.No. 126/2010/ mines date: 27.10.2009	03.05.2010 to 02.05.2015

III. Details of Proposed quarries

Sl No.	Name of the lessee	Village & Taluk	Mineral	S.F No.	Extent in Het	GO No.& Date	Lease period.
	----- Nil -----						



Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

Copy to :-

The Chairman,
Tamil Nadu State Environment
Impact Assessment Authority,
3rd Floor, Panakal Maligai,
No. 1 Jeenes Road, Saidapet,
Chennai -15.

சான்று

கிஷ்நாபுரி லாடலி, கிஷ்நாபுரி வட்டம், கிஷ்நாபுரி
 லாடலி, கிஷ்நாபுரி ஹாஸ்டல் கட்டிடம்
 (400.0 மெட்ரிக்) 78/A, 78/B.
 மெய்நிலை M/S SRI Devarajana 'M' Sand &
 சான்று 500 மெட்ரிக் கிஷ்நாபுரி கிஷ்நாபுரி, கிஷ்நாபுரி
 கிஷ்நாபுரி, கிஷ்நாபுரி, கிஷ்நாபுரி கிஷ்நாபுரி, கிஷ்நாபுரி
 கிஷ்நாபுரி கிஷ்நாபுரி, கிஷ்நாபுரி கிஷ்நாபுரி, கிஷ்நாபுரி
 கிஷ்நாபுரி, கிஷ்நாபுரி, கிஷ்நாபுரி கிஷ்நாபுரி கிஷ்நாபுரி
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 கிஷ்நாபுரி கிஷ்நாபுரி கிஷ்நாபுரி கிஷ்நாபுரி கிஷ்நாபுரி


 08/02/2023
 Village Administrative Officer
 71, KRISHNAGIRI
 KRISHNAGIRI

M/s. Sri Devarajaa 'M' Sand, Rough stone quarry in the S.F.Nos.78/1A(P) & 78/1B(P) over an extent of 4.00.0 ha. in Kothapetta Village, Krishnagiri Taluk, Krishnagiri District.

GENERAL VIEW OF THE LEASE AREA



For M/s. Sri Devarajaa 'M' Sand,

(Deponent)

[Handwritten Signature]
21/02/2023
District Administrative Officer
73, KRISHNAGIRI
KRISHNAGIRI



Committed to Precision

LABORATORY | CONSULTANCY | SUSTAINABILITY

GLOBAL LAB AND CONSULTANCY SERVICES

(An ISO 17025:2017 / NABL accredited & FSSAI notified Laboratory)

S.F.No.92/3A2, Geetha Nagar,

Alagapuram Pudur,

Salem - 636 016, Tamil Nadu.

Phone: 0427 - 2970989 / +91 70944 53636

E-Mail: lab@glcs.in

Web: www.glcs.in

TEST REPORT

Report Number: GLCS/TR/3699/2022-23

Report Date: 19.09.2022

Issued To : Sri Devaraajaa 'M' Sand No.58B Gandhi Nagar, Krishnagiri Town and District .		Site Address: Rough Stone Quarry, Lease Area -4.00.0 Ha, S.F.No.78/1A (Part) and 78/1B , Kothabetta Village, Krishnagiri Taluk , Krishnagiri District.	
Attention	-	Sampling Condition	Good - Active
Customer Ref.No.	TRF No : 1251	Sampled by	Laboratory
Sample Name	Air Quality Monitoring	Sampling Method	GLCS/SOP/PEM/022
Sample Description	Personal Exposure Monitoring	Sample Code	GLCS / 3699
Location Name	Drilling Area & Driller operator cabin	Date of Analysis	14.09.2022
Sampling Hours	09.15 am - 05.15 pm	Date of Completion	19.09.2022
Sampling Date	13.09.2022	Avg Temperature	33.1°C
Sample Receipt Date	14.09.2022	Avg Humidity	64.2%
Discipline	Chemical	Group	Atmospheric Pollution

Sl. NO.	TEST PARAMETER	TEST METHOD	UNITS	RESULT
1	Respirable Dust	GLCS/SOP/PEM/022	mg/m ³	0.31
2	Free Silica	GLCS/SOP/PEM/023	mg/m ³	BDL (DL:0.05)

BDL - Below Detection Limit, DL - Detection Limit

For Global Lab and Consultancy Services

Prepared



Verified

Authorised Signatory

L. SUDHAPRIYA
Technical Manager

*****End of Report*****

Page 1 of 1

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BRANCH OFFICES: HOSUR (Mobile : 70944 54645) & COIMBATORE (Mobile : 70944 54646)



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Salem - 636 016, Tamil Nadu.

Phone: 0427 - 2970989 / +91 70944 53636

E-Mail: lab@glcs.in

Web: www.glcs.in

TEST REPORT

Report Number: GLCS/TR/3700/2022-23

Report Date: 19.09.2022

Issued To : Sri Devaraajaa 'M' Sand No.58B Gandhi Nagar, Krishnagiri Town and District .		Site Address: Rough Stone Quarry, Lease Area -4.00.0 Ha, S.F.No.78/1A (Part) and 78/1B , Kothabetta Village, Krishnagiri Taluk , Krishnagiri District.	
Attention	-	Sampling Condition	Good - Active
Customer Ref.No.	TRF No : 1251	Sampled by	Laboratory
Sample Name	Air Quality Monitoring	Sampling Method	GLCS/SOP/PEM/022
Sample Description	Personal Exposure Monitoring	Sample Code	GLCS / 3700
Location Name	Loading area & Excavator operator cabin	Date of Analysis	14.09.2022
Sampling Hours	09.20 am - 05.20 pm	Date of Completion	19.09.2022
Sampling Date	13.09.2022	Avg Temperature	32.2°C
Sample Receipt Date	14.09.2022	Avg Humidity	64.5%
Discipline	Chemical	Group	Atmospheric Pollution

Sl. NO.	TEST PARAMETER	TEST METHOD	UNITS	RESULT
1	Respirable Dust	GLCS/SOP/PEM/022	mg/m ³	0.26
2	Free Silica	GLCS/SOP/PEM/023	mg/m ³	BDL (DL-0.05)

BDL - Below Detection Limit ,DL - Detection Limit

For Global Lab and Consultancy Services

Prepared



Verified

Authorised Signatory
L. SUDHAPRIYA
Technical Manager

*****End of Report*****

Page 1 of 1

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BRANCH OFFICES: HOSUR (Mobile : 70944 54645) & COIMBATORE (Mobile : 70944 54646)

PHOTOS OF GREEN BELT DEVELOPMENT



CSR ACTIVITIES FOR CHINNAMELPALLI GOVT. HIGHER SCHOOL





Sub-Regional Office
EMPLOYEES' STATE INSURANCE CORPORATION
ESI Corporation, 39/57, Three Roads, Salem

C-11 Regd. with a.d.

To
M/s.SRI DEVARAJAA M SAND
Sf No 78/1a, 78/1b,78/2,78/3
Kothapetta
Kothapetta,635001

Dated : 31/1/2022

Subject:- Implementation of the E.S.I. Act, 1948 and Registration of Employees of the Factories and Establishments under Section 2(12) of the Act, as amended.

Dear Sir(s),

1. It is informed that under section 1(3) of the esi. act, 1948 is applicable to all factories/establishments covered under the act within the area where your factory/establishment is situated
2. It is further informed that the appropriate government has extended the provisions of the act to other establishments under section 1(5) of the act in this area
3. Under section 2 a of the act such a factory/establishment is required to register itself under the act and chapter iv thereof casts a responsibility on the principal employer thereof to get his employees registered and pay contributions in respect of these employees covered under the act.
4. On the basis of the particulars in respect of your factory/establishment submitted by you, the report of the inspection conducted by the Social Security Officer, who inspected your factory on -NA-, your factory falls within the purview of Section 2(12) of the Act with effect from 01-12-2021. In case, however, subsequent facts reveal that your factory was coverable from a date prior to the date mentioned above, you shall make yourself liable to comply with the provisions of the Act from such earlier date.
5. It is requested to take immediate steps for registration of your employees by submitting declaration forms online, payment of contribution, maintenance of records etc. from the date of coverage of your factory/establishment under the act. **You are also requested to submit employer's registration form (form 01) as required under the provisions of sec.2-a of the esi act , 1948 read with regulation 10-b of the esi(general), regulations, 1950.
6. For the sake of convenience your establishment has been allotted code No **63001052950000499** which may kindly be used in all communications sent to this office and on all forms at the place indicated for the purpose. The Branch Office of the Corporation situated at **ESI Hospital Complex, SIPCOT,Hosur 635126** has been instructed to render necessary assistance to you in connection with registration of your employees. In case you find any difficulty or for any other purpose which may be necessary in connection with the Scheme you are requested to contact the Manager of the above Branch Office who will render necessary help in the matter.
7. A State wise list of ESI Dispensaries is available on our website www.esic.nic.in under the link Directories which can be downloaded. It is requested that publicity may be given about the Employees' State Insurance Dispensaries to enable your employees to choose their E.S.I. Dispensaries

8. The corporation officials would be pleased to give all necessary and possible guidance to you in discharging your duties and obligations under the esi act, 1948 and I am confident of prompt and timely compliance under the provisions of the ESI act and regulations on your part.

9. All the Branches of State Bank of India are authorized to accept the ESI Contribution .

10. The brochures/leaflets containing benefits available under the scheme and obligation of the employer etc are available on our website www.esic.nic.in under the link Publications which may be downloaded for wide publicity for the smooth functioning of the scheme

11. Please indicate your code no. on all correspondences to avoid delay

Yours faithfully,

Asstt./Dy. Director

Encl. : As state above

Copy for information and necessary action to:

Name of the principal employer : DEVARAJ MATHIAZHAGAN

No. of employees : 20

ENSURE - TO INSURE ALL ELIGIBLE WORKERS WITH ESI FOR TOTAL SOCIAL SECURITY



संख्या: 406

भारत सरकार / GOVERNMENT OF INDIA
 श्रम एवं रोजगार विभाग / MINISTRY OF LABOUR & EMPLOYMENT
 खनिज, सुरक्षा, महानिर्देशालय / DIRECTORATE GENERAL OF MINES SAFETY
 दक्षिण क्षेत्र, बंगलूरु / SOUTHERN ZONE, BANGALURU



E-Mail : DGMS@doomil.gov.in

Tel: 080-25535871-74 FAX: 080-25535872

No.7th Floor, Sri Yashwantrao Chavan
 Bhavan, Bommar, Bangalore - 560071

Sl. No. SRI DEVA/04/2019-20 406

बंगलूरु, दिनांक: 24/4/2019

प्रभु
 खनिज सुरक्षा निर्देशक,
 बंगलूरु क्षेत्र, बंगलूरु।

स्वासे
 श्री D.Mathlazhagan,
 Partner Sri Devaraajaa 'M' Sand Pough Stone Mine,
 M/s M/s Sri Devaraajaa 'M' Sand,
 55-B Gandhi Nagar, Krishnagiri - 635 001.

विषय:- Conditions governing the use of Heavy Earth Moving Machinery (HEMM) without deep hole drilling and blasting under Reg.106(2)(b) of the MMR, 1961, at Sri Devaraajaa 'M' Sand Pough Stone Mine (SF No.78/1A Part, 78/1B Part) of M/s Sri Devaraajaa 'M' Sand (Partner: Sri D.Mathlazhagan) at Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamilnadu.

सहायक

Please refer to your application submitted vide No.Devaraajaa M Sand/2019/02 dated 01.02.2019 and subsequent correspondence resting with letter No.Devaraajaa M Sand/2019/04 dated 01.02.2019 on the above subject along with surface Plan No.Nil dated 28/11/2018 and updated Surface Plan vide No.SRI DEVA/04/2019-20 dated 25.03.2019 enclosed therewith.

The matter has since been examined in the light of what has been stated in your application. In exercise of the powers conferred on the Chief Inspector of Mines (also designated as Director-General of Mines Safety) under the provisions of clause (2)(b) of Regulation 106 of the Metalliferous Mines Regulations, 1961 and by virtue of the authorization granted to me by the Chief Inspector of Mines (also designated as Director-General of Mines Safety) under Section 6(1) of the Mines Act, 1952, I hereby specify following conditions governing use of Heavy Earth Moving Machinery(HEMM) **without deep hole drilling and blasting** under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961 to form benches in overburden & ore-body Sri Devaraajaa 'M' Sand Rough Stone Mine (SF No.78/1A Part, 78/1B Part) of M/s Sri Devaraajaa 'M' Sand (Partner: Sri D.Mathlazhagan) at Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamilnadu.

RENEWAL OF CONSENT ORDER NO:2209246838715
DATE:16/08/2022



PROCEEDINGS NO.F.1681HSR/RS/DEE/TNPCB/HSR/A/2022 DATED: 16/08/2022

Sub :	Tamil Nadu Pollution Control Board – AUTO RENEWAL OF CONSENT –M/s. SRI DEVARAAJAA M SAND ROUGH STONE QUARRY , S.F. No. 78/1A pt, 78/1B pt., KOTTAPETA village, Krishnagiri Taluk and Krishnagiri District- Renewal of Consent for operation of the plant and discharge of emissions under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) – Issued – Reg.
Ref :	1. CTO's Proc.No.F.1681HSR/RS/DEE/TNPCB/HSR/A/2018, Dated: 20/06/2018 2. Unit's OCMMS application No. 46838715 for Auto renewal, Dated.15.07.2022

Renewal of Consent is hereby granted under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) (hereinafter referred to as "The Act") and the rules and orders made there under to

The Managing Partner,
M/s . SRI DEVARAAJAA M SAND ROUGH STONE QUARRY
S.F No. 78/1A pt, 78/1B pt.,
KOTTAPETA Village,
Krishnagiri Taluk,
Krishnagiri District.

Authorizing the occupier to operate the industrial plant in the Air Pollution Control Area as notified by the Government and to make discharge of emission from the stacks/chimneys.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This RENEWAL OF CONSENT is valid for the period ending - May 29, 2023

R
VENKATESAN
Digitally signed by
R VENKATESAN
Date: 2022.08.17
09:59:58 +05'30'

District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR

SPECIAL CONDITIONS

1. This renewal of consent is valid for operating the facility for the manufacture of products (Col. 2) at the rate (Col. 3) mentioned below. Any change in the products and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

SL.No.	Description	Quantity	Unit
Product Details :-			
1.	Rough Stone quarrying in an extent of 4.00 hectare, Located at SF.No.78/1A pt, 78/1B pt, Kothabetta Village, Krishnagiri Taluk & Krishnagiri District	1025995	Gubic Meter/Five Years
By-Product Details :-			
Intermediate Product Details :-			

2. This renewal of consent is valid for operating the facility with the below mentioned emission/noise sources along with the control measures and/or stack. Any change in the emission source/control measures/change in stack height has to be brought to the notice of the Board and fresh consent/Amendment has to be obtained.

I Point source emission with stack :				
Stack No	Point Emission sources	Air pollution Control measures provided	Stack height from Ground Level in m	Gaseous Discharge in Nm ³ /hr
II Fugitive/Noise emission :				
SL.No.	Fugitive or Noise Emission sources	Type of Emission	Control measures provided	Quantity
1.	Vehicle Movement	Fugitive	Water Sprinkling System	
2.	Drilling	Fugitive	Water Sprinkling System	

Special Additional Conditions-

i. The unit shall install the approved retrofit emission control device/equipment with at least 70% Particulate matter reduction efficiency on all DG sets with capacity of 125 KVA and above or otherwise the unit shall be shift to gas based generators within the time frame prescribed in the notification No.

TNPCB/Labs/DD(L)02151/2019 dated 10.06.2020 issued by TNPCB.

ii. The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board /National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional Conditions-

Special Additional Conditions:

i. The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board/National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional conditions:

- The unit shall carryout the quarrying activity only with the quarry lease agreement made with the District collector, Krishnagiri.
- The unit shall comply all the conditions prescribed in the Environmental Clearance issued vide Lr No. 35/DEIAA-KGI/EC.No.27/2018 Dated 27/02/2018.
- The unit shall comply with the conditions imposed in the Mining Lease Agreement entered with the District Collector, Krishnagiri dated on 31/05/2018.
- The unit shall operate and maintain the APC measures in the form of portable water sprinklers effectively and continuously so as to satisfy the NAAQ/ Emission standards prescribed by the Board.
- The unit shall adhere to the ANL standards as prescribed by the Board.
- The unit shall continue to develop more green belt with trees having thick canopy cover in the unit's premises.
- The unit's operation/ activity for the mining shall not disturb the nearby agricultural land if any at any circumstances.
- The unit shall take necessary precautionary measures to prevent any adverse impact on the nearby habitation.

9.The consent issued is subject to the final outcome of National Green Tribunal (South Zone) in application No. 165/2013.

10.In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification, failing which this order will be withdrawn without any notice and further action will be initiated against the unit as per law.

R VENKATESAN

Digital Signature
R VENKATESAN
Date: 2022.06.07 10:04:42 (GMT+05:30)

**District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR**

To

The Managing Partner,

M/s.SRI DEVARAAJAA M SAND ROUGH STONE QUARRY .

No.58, Ghandhi Nagar, Krishnagiri Town & Krishnagiri District .

Pin: 635001

Copy to:

1.The Commissioner, KRISHNAGIRI-Panchayat Union, Krishnagiri Taluk, Krishnagiri District .

2. Copy submitted to the Member Secretary, Tamil Nadu Pollution Control Board, Chennai for favour of kind information.

3. Copy submitted to the JCEE-Monitoring, Tamil Nadu Pollution Control Board, Vellore for favour of kind information.

4. File

This is computer generated. Signature is not required.

RENEWAL OF CONSENT ORDER NO:2209146838715
DATE:16/08/2022



PROCEEDINGS NO.F.1681HSR/RS/DEE/TNPCB/HSR/W/2022 DATED: 16/08/2022

Sub :	Tamil Nadu Pollution Control Board – AUTO RENEWAL OF CONSENT – M/s. SRI DEVARAAJAA M SAND ROUGH STONE QUARRY S.F No. 78/1A pt, 78/1B pt., KOTTAPETA Village, Krishnagiri Taluk, Krishnagiri District- Renewal of Consent for the operation of the plant and discharge of sewage and/or trade effluent under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act 6 of 1974) – Issued- Reg.
Ref :	1. CTO's Proc.No.F.1681HSR/RS/DEE/TNPCB/HSR/W/2018. Dated: 20/06/2018 2. Unit's OCMMS application No. 46838715 for Auto renewal. Dated:15.07.2022

Renewal Of Consent is hereby granted under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act, 6 of 1974) (hereinafter referred to as "The Act") and the rules and orders made there under to

The Managing Partner,
M/s SRI DEVARAAJAA M SAND ROUGH STONE QUARRY
S.F No. 78/1A pt, 78/1B pt.,
KOTTAPETA Village,
Krishnagiri Taluk,
Krishnagiri District.

Authorising the occupier to make discharge of sewage and /or trade effluent.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

'This RENEWAL OF CONSENT' is valid for the period ending - May 29, 2023

R
VENKATESAN

Digitally signed by R
VENKATESAN
Date: 2022.08.17
10:02:31 +05'30'

District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR

SPECIAL CONDITIONS

1. This renewal of consent is valid for operating the facility for the manufacture of products (Col. 2) at the rate (Col. 3) mentioned below. Any change in the products and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl.No.	Description	Quantity	Unit
a. Product Details :-			
1.	Rough Stone quarrying in an extent of 4.00 hectare, Located at SF.No.78/1A pt, 78/1B pt, Kothabetta Village, Krishnagiri Taluk & Krishnagiri District	1025995	Cubic Meter/Five Years
b. By-Product Details :-			
c. Intermediate Product Details :-			

2. This renewal of consent is valid for operating the facility with the below mentioned permitted outlets for the discharge of sewage/trade effluent. Any change in the outlets and the quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Outlet No.	Description of Outlet	Maximum daily discharge in KLD	Point of disposal
EFFLUENT TYPE :- Effluent Type : Sewage			
1.	Sewage	0.67	On Industrys own land
EFFLUENT TYPE :- Effluent Type : Trade Effluent			
OUTLET NUMBER	DESCRIPTION OF OUTLET	MAXIMUM DAILY DISCHARGE (IN KLD)	POINT OF DISPOSAL

Special Additional Conditions-

The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board /National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional Conditions-

Special Additional Conditions:

1. The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board /National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional conditions:

1. The unit shall carryout the quarrying activity only with the quarry lease agreement made with the District collector, Krishnagiri.
2. The unit shall comply all the conditions prescribed in the Environmental Clearance issued vide Lr.No, 35/DEIAA-KGI/EC.No.27/2018 Dated 27/02/2018.
3. The unit shall comply with the conditions imposed in the Mining Lease Agreement entered with the District Collector, Krishnagiri dated on 31/05/2018.
4. The unit shall treat and dispose the sewage generated from the unit through Septic tank and Soak pit arrangement.
5. The unit shall ensure that no trade effluent is generated at any stage of its manufacturing process.
6. The unit's operation/ activity for the mining shall not disturb the nearby agricultural land if any at any circumstances.
7. The unit shall take necessary precautionary measures to prevent any adverse impact on the nearby habitation.
8. The consent issued is subject to the final outcome of National Green Tribunal (South Zone) in application No. 165/2013.
9. In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification, failing which this order will be withdrawn without any notice and further action will be initiated against the unit as per law.
10. The unit shall not use 'Use and throwaway plastics' such as plastic sheets used for food wrapping, spreading on dining table etc, plastic plates, plastic coated tea cups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastics flags irrespective of thickness, within the industry premises. Instead unit shall encourage use of eco friendly alternative such as banana leaf, arecanut palm plate, stainless steel, glass,

porcelain plates/cups, cloth bag, jute bag etc.,

11. In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification, failing which this order will be withdrawn without any notice and further action will be initiated against the unit as per law.

R
VENKATESAN
Digitally signed by R
VENKATESAN
Date: 2022.08.17
10:03:52 +05'30'
District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR

To

The Managing Partner,
M/s. SRI DEVARAJAA M SAND ROUGH STONE QUARRY,
No.58, Gandhi Nagar, Krishnagiri Town & Krishnagiri District,
Pin: 635001

Copy to:

1. The Commissioner, KRISHNAGIRI-Panchayat Union, Krishnagiri Taluk, Krishnagiri District.
2. Copy submitted to the Member Secretary, Tamil Nadu Pollution Control Board, Chennai for favour of kind information.
3. Copy submitted to the JCEE-Monitoring, Tamil Nadu Pollution Control Board, Vellore for favour of kind information.
4. File


This is computer generated. Signature is not required.

Form 59

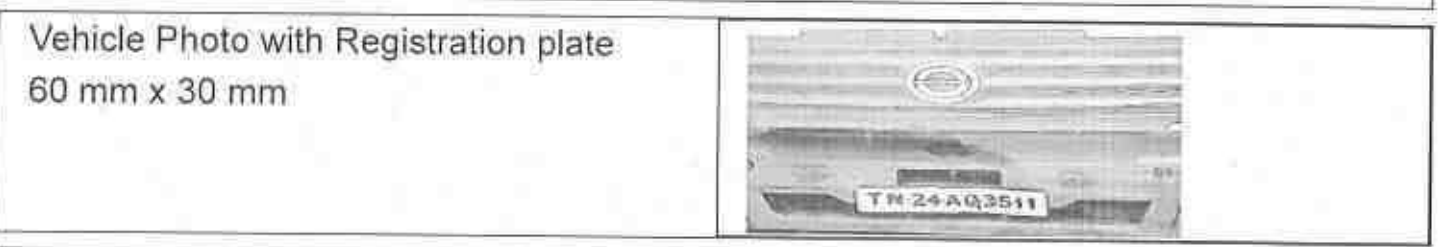
[See rules 115 (2)]

Pollution Under Control Certificate
 Authorised By :
 State Transport Department

Date : 02/03/2023
Time : 12:13:42 PM
Validity upto : 01/03/2024



Certificate SL No. : TN02400170020211
 Registration No. : TN24AQ3511
 Date of Registration : 09/Jan/2019
 Month & Year of Manufacturing : November-2018
 Valid Mobile Number : *****6929
 Emission Norms : BHARAT STAGE IV
 Fuel : DIESEL
 PUC Code : TN0240017
 GSTIN :
 Fees : (GST to be paid extra as applicable)
 MIL observation : No



Sr. No.	Pollutant (as applicable)	Units (as applicable)	Emission limits	Measured Value (upto 2 decimal places)
1	2	3	4	5
Idling Emissions	Carbon Monoxide (CO)	percentage (%)		
	Hydrocarbon, (THC/HC)	ppm		
High Idling emissions	CO	percentage (%)		
	RPM	RPM	2500 ± 200	
	Lambda	-	1 ± 0.03	
Smoke Density	Light absorption coefficient	1/metre	1.62	1.44

This PUC certificate is system generated through the national register of motor vehicles and does not require any signature.

Note : 1. Vehicle owners to link their mobile numbers to registered vehicle by logging to <https://puc.parivahan.gov.in>

Authorised Signature with stamp of PUC operator
 60mm x 20 mm

Form 59

[See rules 115 (2)]

Pollution Under Control Certificate

Authorised By :
State Transport Department

Date : 07/02/2023
Time : 10:21:53 AM
Validity upto : 06/02/2024



Certificate SL No. : TN02400170019733
Registration No: : TN24AQ3556
Date of Registration : 09/Jan/2019
Month & Year of Manufacturing : November-2018
Valid Mobile Number : *****9387
Emission Norms : BHARAT STAGE IV
Fuel : DIESEL
PUC Code : TN0240017
GSTIN :
Fees : (GST to be paid extra as applicable)
MIL observation : No

Vehicle Photo with Registration plate
60 mm x 30 mm



Sr. No.	Pollutant (as applicable)	Units (as applicable)	Emission limits	Measured Value (upto 2 decimal places)
1	2	3	4	5
Idling Emissions	Carbon Monoxide (CO)	percentage (%)		
	Hydrocarbon, (THC/HC)	ppm		
High idling emissions	CO	percentage (%)		
	RPM	RPM	2500 ± 200	
	Lambda	-	1 ± 0.03	
Smoke Density	Light absorption coefficient	1/metre	1.62	1.35

This PUC certificate is system generated through the national register of motor vehicles and does not require any signature.

Note : 1. Vehicle owners to link their mobile numbers to registered vehicle by logging to <https://puc.parivahan.gov.in>

Authorised Signature with stamp of PUC operator
60mm x 20 mm

FORM 'O'
(Refer rules 29 - F (2) and 29 - L)

REPORT OF MEDICAL EXAMINATION UNDER RULE 29- B
(To be issued in triplicate)

Certificate No. :- 01

Certified that Shri R. JESURAT PRABHAKARAN employed as Mines Manager in M/S DEVARAJ M/S mine. For D. No. has been examined for an initial / periodical medical examination. He appears to be 33 years of age. The findings of the examining authority are given in the attached sheet. It is considered that Shri R. JESURAT PRABHAKARAN

- a) Is medically fit for a / employment in mines.
- b) Is suffering from _____ and is medically unfit for
 - i. Any employment in mines ; or
 - ii. Any employment below ground ; or
 - iii. Any employment or work _____
- c) Is suffering from _____ and should get this disability cured / controlled and should be again examined within a period of _____ months. He will appear for re-examination with the result of test of test of _____ and the opinion of _____ he may be permitted / not permitted to carry on his duties during this period.



Signature of examination authority

Dr. N. SELVA RAJU, MBBS, DLO,
Senior Assistant Surgeon
Reg. No: 64284
GOVT. HOSP. HOSPITAL
KRISHNAGIRI-635 001.

Name and Designation
In block letters

Place: KRISHNAGIRI
Date: 08/02/2019.

7. Circulatory System:

Blood Pressure 120/80

Pulse 120/80

8. Abdomen:

Tenderness NORMAL

Liver NORMAL

Spleen NORMAL

Tumour NORMAL

9. Nervous System:

History of fits or epilepsy NIL

Paralysis NIL

Mental health NORMAL

10. Locomotor System NORMAL

11. Skin NORMAL

12. Hernia NIL

13. Hydrocele NIL

14. Any other abnormality NIL

15. Urine:

Reaction NORMAL

Albumin NORMAL

Sugar NORMAL

16. Skiagram of chest NORMAL

17. Any other "c" test considered necessary by the examining authority NIL

18. Any opinion of specialist considered necessary NOT APPLICABLE

Place: KRISHNAGIRI

Date: 08/02/2019

Signature of the examining authority

J. M. SELVARAJ, MBBS, DLO.
Senior Assistant Surgeon
Reg. No: 64284
GOVT. HQRS. HOSPITAL
KRISHNAGIRI-535 001.

FORM 'O'

(Refer rules 29 - F (2) and 29 - L)

REPORT OF MEDICAL EXAMINATION UNDER RULE 29- B
(To be issued in triplicate)

Certificate No.: 02

Certified that Shri T. Ashok Kumar employed as Supervisor in S DEVARAJA M SAND mine. For D. No. has been examined for an initial / periodical medical examination. He appears to be 28 years of age. The findings of the examining authority are given in the attached sheet. It is considered that Shri

Ashok Kumar

- a) Is medically fit for any employment in mines.
- b) Is suffering from _____ and is medically unfit for
- Any employment in mines ; or
 - Any employment below ground ; or
 - Any employment or work _____
- c) Is suffering from _____ and should get this disability cured / controlled and should be again examined within a period of _____ months. He will appear for re-examination with the result of test of test of _____ and the opinion of _____ he may be permitted / not permitted to carry on his duties during this period.



Signature of examination authority

[Handwritten Signature]

Jr. M. SELVARAJ, MBBS, DLG,
Senior Assistant Surgeon
Reg. No: 64284
GOVT. HQRS. HOSPITAL
KRISHNAGIRI-635 001.

Name and Designation
In block letters

Place: KRISHNAGIRI
Date: 08/02/2019

REPORT OF THE EXAMINING AUTHORITY

(To be filled in every medical examination whether initial or periodical or re-examination or after cure / control of disability)

Annexure to certificate No as a result of medical examination on 08-02-2013

Identification mark

A Black mark on
left side chest


Left thumb impression of the candidate
Good / Fair / Poor

1. General development
2. Height 168 Cms
3. Weight 75 Kg
4. Eyes:

i. Visual acuity - Distant vision (with or without glasses)

Right eye Normal

Left eye Normal

ii. Any organic disease of eyes

iii. Night blindness Nil

iv. Colour blindness Nil

v. Squint Nil

† (To be tested in special cases)

5. Ears:

i. Hearing right ear Normal Left ear Normal

ii. Any organic disease Nil

6. Respiration system:

Chest measurement 85 / 89

i. After full inspiration 85 cms.

ii. After full expiration 89 cms.

7. Circulatory System:

Blood Pressure 120/80

Pulse 120/50

8. Abdomen:

Tenderness Normal

Liver Normal

Spleen Normal

Tumour Nil

9. Nervous System:

History of fits or epilepsy Nil

Paralysis Nil

Mental health Nil

10. Locomotor System Nil

11. Skin Normal

12. Hernia Nil

13. Hydrocele Nil

14. Any other abnormality Nil

15. Urine:

Reaction Normal

Albumin Normal

Sugar Normal

16. Skiagram of chest Normal

17. Any other "c" test considered necessary by the examining authority.....

18. Any opinion of specialist considered necessary.....

Place: KRISHNAGIRI

Date: 08/02/2019.

Signature of the examining authority

Dr. M. SELVARAJ, MBBS, DLO,
Senior Assistant Surgeon
Reg. No: 64284
GOVT. HQRS. HOSPITAL
KRISHNAGIRI-635 001.

PHOTOS OF DRINKING / SANITATION FACILITIES





THIRU. A.R. RAHUL NADH, I.A.S.
MEMBER SECRETARY

STATE LEVEL ENVIRONMENT IMPACT
ASSESSMENT AUTHORITY-TAMILNADU

3rd Floor, Panagal Maaligai,
No.1, Jeenis Road, Saidapet,
Chennai - 600 015.
Phone No. 044-24359973
Fax No. 044-24359975

TERMS OF REFERENCE (ToR)

Lr No.SEIAA-TN/F.No.10248/SEAC/ToR- 1676/2024 Dated:14.02.2024.

To

Tmt.K.M. Vijaya
W/o.D.M. Mathiazhagan
D.No.58B Gandhi Nagar,
Krishnagiri Town,
Krishnagiri District

Sir / Madam,

Sub: SEIAA, Tamil Nadu – Terms of Reference with Public Hearing (ToR) for the Proposed Rough Stone quarry over an extent of 4.00.0 Ha of Patta land in S.F.Nos. 78/1B(P), of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu by Tmt. K.M.Vijaya - under project category – “B1” and Schedule S.No.1(a) – ToR issued along with Public Hearing - preparation of EIA report – Regarding.

- Ref:
1. Online proposal No. SIA/TN/MIN/430521/2023, 24.06.2023.
 2. Your application submitted for Terms of Reference dated: 26.07.2023.
 3. Minutes of the 407th meeting of SEAC held on 07.09.2023.
 4. Minutes of the 658th meeting of SEIAA held on 26.09.2023 & 27.09.2023.
 5. Minutes of the 439th meeting of SEAC held on 10.01.2024.
 6. Minutes of the 696th meeting of SEIAA held on 14.02.2024.

Kindly refer to your proposal submitted to the State Level Impact Assessment Authority for Terms of Reference.

MEMBER SECRETARY
SEIAA-TN

The proponent, Tmt. K.M.Vijaya has submitted application for Terms of Reference with Public Hearing (ToR), in Form-I, Pre-Feasibility report for the Proposed Rough Stone quarry over an extent of 4.00.0 Ha of Patta land in S.F.Nos. 78/1B(P), of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu.

Discussion by SEAC and the Remarks:-

Proposed Rough Stone quarry over an extent of 4.00.0 Ha of Patta land in S.F.Nos. 78/1B(P), of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu by Tmt. K.M.Vijaya - For Terms of Reference. (SIA/TN/MIN/430521/2023, 24.06.2023)

The proposal was earlier placed in the 407th meeting of SEAC held on 07.09.2023. The Project Proponent made a detailed presentation on the proposed project. The details of the project furnished by the proponent are available on the PARIVESH web portal (parivesh.nic.in).

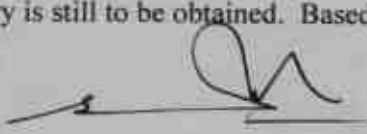
The SEAC noted the following:

1. The Project Proponent, Tmt. K.M.Vijaya has applied seeking Terms of Reference for EIA study for the Proposed Rough Stone quarry over an extent of 4.00.0 Ha of Patta land in S.F.Nos. 78/1B(P), of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu.
2. The proposed quarry/activity is covered under Category "B1" of Item 1(a) "Mining Projects" of the Schedule to the EIA Notification, 2006 as amended.
3. DEIAA EC vide DEIAA – KGI Lr No 34/DEIAA-KGI/Ec.No. 26/2018 Dated 27.02.2018.

Based on the request of the Project Proponent, the SEAC directed the PP to submit the details of last date of mining carried out at the project site validated by Department of Geology & Mining. On receipt of the details sought the SEAC will deliberate further and decide on future course of action.

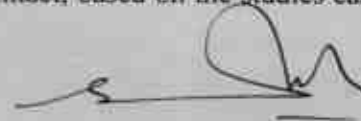
Subsequently the subject was taken up for discussion in the 430th meeting of SEAC held on 14.12.2023. The EIA coordinator informed the Committee that the Environmental Clearance Dated:27.02.2018 issued for their proposal by DEIAA is valid upto **29.05.2024** (Including COVID Extension) and that the PP wish to avail the benefit of DEIAA-SEIAA Reappraisal OM Dated:28.04.2023 & 03.11.2023 and further requested that the PP may be permitted to submit the CCR of the existing quarry along with final EIA. Hence the SEAC decided to defer the proposal to later date.

Now the subject was taken up for discussion in this 439th meeting of SEAC held on 10.01.2024. The PP informed the Committee that the CCR for the existing quarry is still to be obtained. Based on the


**MEMBER SECRETARY
SEIAA-TN**

presentation made by the proponent SEAC recommended grant of **Terms of Reference (TOR) with Public Hearing** as per the **Annexure I** of this minute, subject to the following TORs, in addition to the standard terms of reference for EIA study for non-coal mining projects and details issued by the MOEF & CC to be included in EIA/EMP Report:

1. The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building, number of residents, their profession and income, etc.
2. The PP shall furnish the ownership details of the physical structures located near the proposed mine lease area, number of workers, time period of working etc
3. If the existing depth of quarry has already reached 30 m, for the safety of the persons employed in the quarry, the PP shall carry out the scientific studies and to furnish the report with assessing the slope stability of the working benches and existing quarry walls for evaluating the slope stabilization & protective measures while designing the proposed benches, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRM/Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus. A copy of such scientific study report shall be submitted to the SEIAA, MoEF, TNPCB, AD/Mines-DGM and DMS, Chennai as a part of Environmental Compliance without any deviation.
4. The project proponent shall furnish Certified Compliance Report (CCR) obtained from IRO(SZ), MoEF&CC and with mitigation measures along with the budgetary allocation for the non-compliance stated therein.
5. The Project Proponent shall furnish the revised EMP based on the study carried out on impact of the dust & other environmental impacts due to proposed quarrying operations on the nearby agricultural lands for remaining life of the mine in the format prescribed by the SEAC considering the cluster situation.
6. The PP shall prepare a conceptual working plan accommodating the remedial actions such as inclusion of haul road accessibility keeping the benches intact, based on the studies carried




**MEMBER SECRETARY
SEIAA-TN**

out to assess the slope stability of the working benches to be constructed and existing quarry wall. The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and slope stability action plan during the time of appraisal for obtaining the EC.

7. The PP shall undertake Hydrogeology study considering nearby existing wells, Aquifers, Ground water & surface water levels etc within the radius of 1km.

ANNEXURE-I

1. The PP shall furnish the letter obtained from the AD (Mines) indicating the existing pit dimensions and pit conditions showing the details on mine having worked during the earlier lease period.
2. The PP shall furnish DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., up to a radius of 25 km from the proposed site.
3. The PP shall provide individual notice regarding the Public Hearing to the nearby house owners located in the vicinity of the project site.
4. The Proponent shall justify the selection of the site for carrying out the stone quarrying with the total volume arrived for the excavation & production adequate details such as lithology of the deposit, reserve estimation, place for waste dump/mined mineral storage, end-use of mined materials, identified potential customers/end-users and travel path.
5. The PP shall also justify the selection of mining methodology (conventional or non-conventional) adopting blasting techniques/non-explosive techniques with proper ground reality & laboratory testing.
6. The proponent shall submit the "Blast Design Parameters for controlling the vibration and fly rock from the quarry blasting" considering the existence of sensitive structures including habitations within 500 m from the lease boundary.
7. The PP shall justify the estimation of HEMM population for excavation and transportation in the proposed quarries with proper calculation methodology adopted.
8. The PP shall enumerate the environmental settings situated within a radial distance of 1 km such rivers/water bodies/reserve forests/ grazing land/existence of the hospitals and educational institutions/structures.
9. The PP shall provide the details of the anticipated impacts of the mining operations on the surrounding environment and the remedial measures for the same.



MEMBER SECRETARY
SEIAA-TN

10. The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m (v) 500m with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building, number of residents, their profession and income, etc.
11. The PP shall submit a 'Slope Stability Action Plan' for the proposed quarry where the proposed depth exceeds 30 m and it shall cover the aspects of stability of quarry walls including the access ramp keeping the benches intact.
12. If the blasting operation is to be carried out, the PP shall present a conceptual design for carrying out the NONEL initiation based controlled blasting operation including the line drilling & muffle blasting techniques and a Simulation Model indicating the anticipated Blast-induced Ground Vibration levels in the proposed quarry as stipulated by the DGMS Circular No.7 of 1997, during the EIA Proposal.
13. The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/I Class mines manager appointed by the proponent.
14. The PP shall give an affidavit stating that no contractual persons provided by the explosive suppliers will be employed for carrying out the blasting operations in the proposed quarry.s
15. The PP shall also give an affidavit that no highly sensitive structure such as fire-cracker manufacturing units, Gas godown/explosive Magazine, LPG Bottling Units, etc are located within a radial distance of 300 m from the lease boundary of the proposed quarry.
16. The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 20 m from the blast site.
17. The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidences.
18. The PP shall provide the environmental mitigation measures implemented for the crusher(s) located within the mining lease.
19. If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines,



**MEMBER SECRETARY
SEIAA-TN**



- a. What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?
 - b. Quantity of minerals mined out.
 - c. Highest production achieved in any one year
 - d. Detail of approved depth of mining.
 - e. Actual depth of the mining achieved earlier.
 - f. Name of the person already mined in that leases area.
 - g. If EC and CTO already obtained, the copy of the same shall be submitted.
 - h. Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.
20. If any quarrying operations were carried out in the proposed quarrying site for which now the EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF&CC, Regional Office, Chennai (or) the concerned DEE/TNPCB.
21. All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/Topo sheet, topographic sheet, geomorphology, lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
22. The PP shall carry out Drone video survey covering the cluster, Green belt, fencing etc.,
23. The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.
24. The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of Mines Act 1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.
25. The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Based on actual


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- monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided.
26. The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality & flora/fauna including traffic/vehicular movement study.
 27. The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of soil health, biodiversity, air pollution, water pollution, climate change and flood control & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.
 28. Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.
 29. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
 30. Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be provided.
 31. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
 32. If the Village road/State highway/National highway are located within a radial distance of 500 m from the lease boundary of the quarry proposal, the PP shall carry out traffic studies to indicate impact on local transport infrastructure due to the Project and mitigation measures.
 33. A tree survey study shall be carried out (nos., name of the species, age, diameter etc.,) both within the mining lease applied area & 300m buffer zone and its management during mining activity.
 34. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.
 35. Public Hearing points raised and commitments of the Project Proponent on the same along



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- with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project and to be submitted to SEIAA/SEAC with regard to the Office Memorandum of MoEF& CC accordingly.
36. The Public hearing advertisement shall be published in one major National daily and one most circulated vernacular daily.
 37. The PP shall produce/display the EIA report, Executive summary and other related information with respect to public hearing in Tamil Language also.
 38. As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study, wherever possible.
 39. The purpose of Green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the **appendix-I** in consultation with the DFO, State Agriculture University and local school/college authorities. The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.
 40. Taller/one year old Saplings raised in appropriate size of bags, preferably eco-friendly bags should be planted as per the advice of local forest authorities/botanist/Horticulturist with regard to site-specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner
 41. A Disaster Management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.
 42. A Risk Assessment and Management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.
 43. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.



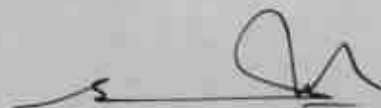
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44. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
45. The Socio-economic studies should be carried out within a 5 km buffer zone from the mining activity. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
46. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
47. Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
48. If any quarrying operations were carried out in the proposed quarrying site for which now the EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF&CC, Regional Office, Chennai (or) the concerned DEE/TNPCB.
49. The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.
50. Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the Environment (Protection) Act, 1986.

Appendix

List of Native Trees Suggested for Planting

1. *Aegle marmelos* – Vilvam
2. *Adenanthera pavonina* - Manjadi
3. *Albizia lebbek* – Vaagai
4. *Albizia amara* - Usil
5. *Bauhinia purpurea* - Mantharai
6. *Bauhinia racemosa* - Aathi
7. *Bauhinia tomentosa* – Iruvathi
8. *Buchanania axillaris* - Kattuma
9. *Borassus flabellifer* - Panai



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10. *Butea monosperma* - Murukka maram
11. *Bobax ceiba* - Ilavu, Sevvilavu
12. *Calophyllum inophyllum* - Punnai
13. *Cassia fistula* - Sarakondrai
14. *Cassia roxburghii*- Sengondrai
15. *Chloroxylon sweitenia* - Purasa maram
16. *Cochlospermum religiosum* - Kongu, Manjal Ilavu
17. *Cordia dichotoma* - Mookuchali maram
18. *Creteva adansonii* - Mavalingum
19. *Dillenia indica* - Uva, Uzha
20. *Dillenia pentagyna* - Siru Uva, Sitruzha
21. *Diospyros ebenum* - Karungali
22. *Diospyros chloroxylon* - Vaganai
23. *Ficus amplissima* - Kal Itchi
24. *Hibiscus tiliaceus* - Aatru poovarasu
25. *Hardwickia binata* - Aacha
26. *Holoptella integrifolia* - Aayili
27. *Lannea coromandelica* - Odhiam
28. *Lagerstroemia speciosa* - Poo Marudhu
29. *Lepisanthus tetraphylla* - Neikottai maram
30. *Limonia acidissima* - Vila maram
31. *Litsea glutinosa* - Pisin pattai
32. *Madhuca longifolia* - Illuppai
33. *Manilkara hexandra* - Ulakkai Paalai
34. *Mimusops elengi* - Magizha maram
35. *Mitragyna parvifolia* - Kadambu
36. *Morinda pubescens* - Nuna
37. *Morinda citrifolia* - Vellai Nuna
38. *Phoenix sylvestre* - Eachai
39. *Pongamia pinnata* - Pungam
40. *Premna mollissima* - Munnai


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41. *Premna serratifolia* – Narumunnai
42. *Premna tomentosa* - Purangai Naari, Pudanga Naari
43. *Prosopis cinerea* - Vanni maram
44. *Pterocarpus marsupium* - Vengai
45. *Pterospermum canescens* – Vennangu, Tada
46. *Pterospermum xylocarpum* - Polavu
47. *Puthranjiva roxburghii* – Puthranjivi
48. *Salvadora persica* – Uгаа Maram
49. *Sapindus emarginatus* - Manipungan, Soapu kai
50. *Saraca asoca* - Asoca
51. *Streblus asper* - Piraya maram
52. *Strychnos nuxvomica* – Yetti
53. *Strychnos potatorum* - Therthang Kottai
54. *Syzygium cumini* - Naval
55. *Terminalia bellerica* - Thandri
56. *Terminalia arjuna* - Ven marudhu
57. *Toona ciliate* – Sandhana vembu
58. *Thespesia populnea* - Puvarasu
59. *Walsuratrifoliata* – valsura
60. *Wrightia tinctoria* – Veppalai
61. *Pithecellobium dulce* – Kodukkapuli

Discussion by SEIAA and the Remarks:-

Proposed Rough Stone quarry over an extent of 4.00.0 Ha of Patta land in S.F.Nos. 78/1B(P), of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu by Tmt. K.M.Vijaya - For Terms of Reference.

The subject was placed in this 696th meeting of Authority held on 14.02.2024. The Authority noted that the subject was placed in the 439th meeting of SEAC held on 22.12.2023 and the SEAC has furnished its recommendations for the grant of **Terms of Reference (TOR) with Public Hearing** to the project subject to the conditions stated therein.




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After detailed discussions, the Authority accepted the recommendation of SEAC and decided to grant **Terms of Reference (ToR) with Public Hearing** based on studies, assessments and records to be produced as sought by the SEAC and SEIAA, for undertaking the Environment Impact Assessment Study and preparation of Environment Management Plan subject to the conditions as recommended by SEAC & normal conditions and conditions in **Annexure 'B'** of this minutes.

Annexure 'B'

Cluster Management Committee

1. Cluster Management Committee shall be framed which must include all the proponents in the cluster as members including the existing as well as proposed quarry.
2. The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc.,
3. The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.
4. Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.
5. The committee shall deliberate on risk management plan pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan.
6. The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the environmental policy devised shall be given in detail.
7. The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.
8. The committee shall furnish the Emergency Management plan within the cluster.
9. The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public.
10. The committee shall furnish an action plan to achieve sustainable development goals with reference to water, sanitation & safety.
11. The committee shall furnish the fire safety and evacuation plan in the case of fire accidents.


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Impact study of mining

12. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area covering the entire mine lease period as per precise area communication order issued from reputed research institutions on the following
- Soil health & soil biological, physical land chemical features .
 - Climate change leading to Droughts, Floods etc.
 - Pollution leading to release of Greenhouse gases (GHG), rise in Temperature, & Livelihood of the local people.
 - Possibilities of water contamination and impact on aquatic ecosystem health.
 - Agriculture, Forestry & Traditional practices.
 - Hydrothermal/Geothermal effect due to destruction in the Environment.
 - Bio-geochemical processes and its foot prints including environmental stress.
 - Sediment geochemistry in the surface streams.

Agriculture & Agro-Biodiversity

13. Impact on surrounding agricultural fields around the proposed mining Area.
14. Impact on soil flora & vegetation around the project site.
15. Details of type of vegetations including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetations all along the boundary of the proposed mining area shall committed mentioned in EMP.
16. The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.
17. Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.
18. The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.

Forests

19. The project proponent shall detailed study on impact of mining on Reserve forests free ranging wildlife.



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20. The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.
21. The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.
22. The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.

Water Environment

23. Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period.
24. Erosion Control measures.
25. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies/ Rivers, & any ecological fragile areas.
26. The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.
27. The project proponent shall study and furnish the details on potential fragmentation impact on natural environment, by the activities.
28. The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts.
29. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.
30. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.

Energy

31. The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilise the Energy shall be furnished.



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Climate Change

32. The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities.
33. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock.

Mine Closure Plan

34. Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.

EMP

35. Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued.
36. The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan.

Risk Assessment

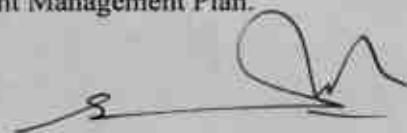
37. To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining.

Disaster Management Plan

38. To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid/reduce vulnerability to hazards & to cope with disaster/untoward accidents in & around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued.

Others

39. The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological sites, Structures, railway lines, roads, water bodies such as streams, odai, vaari, canal, channel, river, lake pond, tank etc.
40. As per the MoEF& CC office memorandum F.No.22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.



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41. The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment. The ecological risks and impacts of plastic & microplastics on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.

A. STANDARD TERMS OF REFERENCE

- 1) Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.
- 2) A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
- 3) All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.
- 4) All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/ topo sheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
- 5) Information should be provided in Survey of India Topo sheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.
- 6) Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.
- 7) It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of


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- the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.
- 8) Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.
 - 9) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.
 - 10) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
 - 11) Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.
 - 12) Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
 - 13) Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of Net Present Value (NPV) and Compensatory Afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
 - 14) Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
 - 15) The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
 - 16) A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out

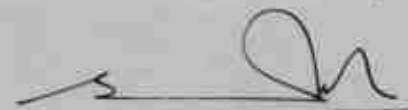

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- with cost implications and submitted.
- 17) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.
 - 18) A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
 - 19) Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.
 - 20) Similarly, for Coastal Projects, a CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease with respect to CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).
 - 21) R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out


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whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.

- 22) One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season); December-February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.
- 23) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of Vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
- 24) The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
- 25) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
- 26) Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
- 27) Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.
- 28) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers



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present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.

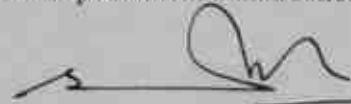
- 29) Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.
- 30) Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
- 31) A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.
- 32) Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.
- 33) Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
- 34) Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.
- 35) Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.
- 36) Public health implications of the Project and related activities for the population in the impact



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zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.

- 37) Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
- 38) Detailed Environmental Management Plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
- 39) Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 40) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 41) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 42) A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
- 43) Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
- 44) Besides the above, the below mentioned general points are also to be followed:-
 - a) Executive Summary of the EIA/EMP Report
 - b) All documents to be properly referenced with index and continuous page numbering.
 - c) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.
 - d) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.
 - e) Where the documents provided are in a language other than English, an English translation should be provided.
 - f) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.
 - g) While preparing the EIA report, the instructions for the Proponents and instructions for



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the Consultants issued by MoEF&CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.

- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the ToR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.
- i) As per the circular no. J-11011/618/2010-IA.II (I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the Environment Clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.
- j) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

In addition to the above, the following shall be furnished:-

The Executive summary of the EIA/EMP report in about 8-10 pages should be prepared incorporating the information on following points:

1. Project name and location (Village, District, State, Industrial Estate (if applicable)).
2. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes.
3. Measures for mitigating the impact on the environment and mode of discharge or disposal.
4. Capital cost of the project, estimated time of completion.
5. The proponent shall furnish the contour map of the water table detailing the number of wells located around the site and impacts on the wells due to mining activity.
6. A detailed study of the lithology of the mining lease area shall be furnished.
7. Details of village map, "A" register and FMB sketch shall be furnished.
8. Detailed mining closure plan for the proposed project approved by the Geology of Mining department shall be submitted along with EIA report.
9. Obtain a letter /certificate from the Assistant Director of Geology and Mining standing that there


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- is no other Minerals/resources like sand in the quarrying area within the approved depth of mining and below depth of mining and the same shall be furnished in the EIA report.
10. EIA report should strictly follow the Environmental Impact Assessment Guidance Manual for Mining of Minerals published February 2010.
 11. Detail plan on rehabilitation and reclamation carried out for the stabilization and restoration of the mined areas.
 12. The EIA study report shall include the surrounding mining activity, if any.
 13. Modeling study for Air, Water and noise shall be carried out in this field and incremental increase in the above study shall be substantiated with mitigation measures.
 14. A study on the geological resources available shall be carried out and reported.
 15. A specific study on agriculture & livelihood shall be carried out and reported.
 16. Impact of soil erosion, soil physical chemical and biological property changes may be assumed.
 17. Site selected for the project - Nature of land - Agricultural (single/double crop), barren, Govt./ private land, status of its acquisition, nearby (in 2-3 km.) water body, population, within 10km other industries, forest, eco-sensitive zones, accessibility, (note - in case of industrial estate this information may not be necessary)
 18. Baseline environmental data - air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population
 19. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
 20. Likely impact of the project on air, water, land, flora-fauna and nearby population
 21. Emergency preparedness plan in case of natural or in plant emergencies
 22. Issues raised during public hearing (if applicable) and response given
 23. CER plan with proposed expenditure.
 24. Occupational Health Measures
 25. Post project monitoring plan
 26. The project proponent shall carry out detailed hydro geological study through intuitions/NABET Accredited agencies.
 27. A detailed report on the green belt development already undertaken is to be furnished and also submit the proposal for green belt activities.
 28. The proponent shall propose the suitable control measure to control the fugitive emissions during



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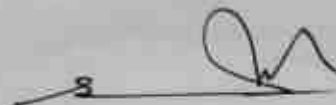


the operations of the mines.

29. A specific study should include impact on flora & fauna, disturbance to migratory pattern of animals.
30. Reserve funds should be earmarked for proper closure plan.
31. A detailed plan on plastic waste management shall be furnished. Further, the proponent should strictly comply with, Tamil Nadu Government Order (Ms) No.84 Environment and forests (EC.2) Department dated 25.06.2018 regarding ban on one time use and throw away plastics irrespective of thickness with effect from 01.01.2019 under Environment (Protection) Act, 1986. In this connection, the project proponent has to furnish the action plan.

Besides the above, the below mentioned general points should also be followed:-

- a. A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b. All documents may be properly referenced with index, page numbers and continuous page numbering.
- c. Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
- d. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF & CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.
- e. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. In this regard circular no F. No.J-11013/77/2004-IA-II(I) dated 2nd December, 2009, 18th March 2010, 28th May 2010, 28th June 2010, 31st December 2010 & 30th September 2011 posted on the Ministry's website <http://www.moef.nic.in/> may be referred.
 - After preparing the EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned points, the proponent will take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.



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- The final EIA report shall be submitted to the SEIAA, Tamil Nadu for obtaining Environmental Clearance.
- The TORs with public hearing prescribed shall be **valid for a period of three years** from the date of issue, for submission of the EIA/EMP report as per OMNo.J-11013/41/2006-IA-II(I)(part) dated 29th August, 2017.



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Copy to:

1. The Additional Chief Secretary to Government, Environment, Climate Change and Forests Department, Govt. of Tamil Nadu, Fort St. George, Chennai - 9.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD Cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
3. The Chairman, Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai - 600 032.
4. The APCCF (C), Regional Office, MoEF & CC (SZ), 34, HEPC Building, 1st & 2nd Floor, Cathedral Garden Road, Nungambakkam, Chennai - 34.
5. Monitoring Cell, IA Division, Ministry of Environment, Forests & CC, Paryavaran Bhavan, CGO Complex, New Delhi - 110 003.
6. The District Collector, Krishnagiri District.
7. Stock File.

From
Dr. S.Vediappan, M.Sc.,Ph.d.,
Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

To
Tmt. K.M. Vijaya,
W/o. D. Madhiazhagan,
D.No. 58B, Gandhi Nagar,
Krishnagiri Town,
Krishnagiri District – 635 001.

Roc.No.1120/2020/Mines Dated: 09.02.2023

Sir,

Sub: Mines and Minerals – Rough stone - Krishnagiri District – Krishnagiri Taluk – Kothapetta Village-patta land in S.F.No. 78/1B(P) Over an extent of 4.00.00 Hects – Quarry lease granted to Tmt. K.M. Vijaya - Scheme of mining submitted - approved – Other quarry situated in 500 mtrs radial distance – Details furnished - reg.

Ref:

1. The District Collector, Krishnagiri Proc.Roc.No.419/2017/ Mines Dated: 30.05.2018.
2. Mining Plan approved by the Deputy Director of Geology and Mining, Krishnagiri in Rc.no. 419/2017/Mines dated: 29.12.2017.
3. Assistant Director Geology and Mining, Krishnagiri Proc. Rc.no. 1120/2020/mines dated: 26.04.2021.
4. 1st Scheme of Mining plan approved by Deputy Director of Geology and Mining, Krishnagiri in Rc.no. 1120/2020/Mines dated: 27.01.2023.
5. Tmt. K.M. Vijaya, Gandhi Nagar, Krishnagiri letter dated: 09.02.2023.

Kind attention is invited to the references cited above.

2. A quarry lease had been granted in favour of Tmt. K.M. Vijaya, to quarry Rough stone for a period of 10 years over an extent of 4.00.00 hecets of Patta land in S.F.No. 78/1B(P) of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District vide the District Collector, Krishnagiri Proc.Roc.No.419/2017/Mines dated: 30.05.2018 and Assistant Director Geology and Mining Proc. Rc.No. 1120/2020/Mines dated: 26.04.2021 under TNMMCR Rules 1959. The lease deed has been executed on 30.05.2018 and the lease period is valid upto 29.05.2028.

3. The Mining plan for the subject Rough stone quarry was approved by the Deputy Director of Geology and Mining, vide letter Rc. No. 419/2017/Mines Dated: 29.12.2017.

4. The lessee has submitted 1st Scheme of mining for the 2nd five years which was approved by the Deputy Director of Geology and Mining, Krishnagiri vide letter dated: 27.01.2023.

5. In this connection, the details of quarries situated within 500mts and Pit dimension of existing Pit and Permit taken details for the subject quarry requested by the lessee vide letter dated: 09.02.2023 to furnish the same before SELAA in orders to get Environmental Clearance

I. Details of Existing quarries.

Sl No	Name of the lessee	Village & Taluk	Mineral	S.F No.	Extent in Het	GO No.& Date	Lease period.
1.	Tmt. K.M. Vijaya, W/o. D. Madhiazhagan, D.No. 58B, Gandhi Nagar, Krishnagiri Town, Krishnagiri	Krishnagiri, Kothapetta	Rough Stone	78/1B(P)	4.00.00	Rc.No. 419/2017/ Mines dated 30.05.2018	31.05.2018 to 30.05.2028 Instant Proposal (proposed for 2 nd five year)
2.	M/S. Devarajaa M.Sand, No. 58 B Gandhi Nagar, Krishnagiri	Krishnagiri, Kothapetta	Rough Stone	78/1A(P) & 78/1B(P)	4.00.00	Rc.No. 418/2018/ Mines dated 30.05.2018	31.05.2018 to 30.05.2028
3.	M/s. Ma Quality stone, 58B Gandhi Nagar	Krishnagiri, Kothapetta	Rough Stone	87/1B2(P)	3.70.00	Rc.No. 1179/2020 mines date: 23.11.2022	23.11.2022 to 22.11.2032

II. Details of abandoned/Old quarries.

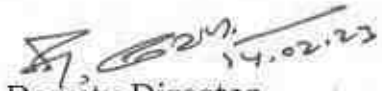
Sl No	Name of the lessee	Village & Taluk	Mineral	S.F No.	Extent in Het	GO No.& Date	Lease period.
1.	Thiru. Ganesan	Krishnagiri, Kothapetta	Rough Stone	56/1(P-D)	2.54.00	Rc.No. 611/2009/ Mines dated 14.05.2015	14.05.2015 to 13.05.2020
2.	Tmt. Sa. Sumitha Shankar, W/o Shankar Raj, 252, Metbanda Village, Venkatapur am Panchayat, Krishnagiri Post Taluk & Dit.	Krishnagiri, Kothapetta	Rough Stone	56/1 (P-5)	1.20.00	Rc.No. 49/2016/ Mines dated 18.08.2016	1.09.2016 to 31.08.2021

No. 3d by

3.	Tmt. Qummurunnisa	Krishnagiri, Kothapetta	Rough Stone	87/1B1(P) & 87/1B2(P)	4.75.00	Rc.No. 08/2023/ mines date: 05.02.2016	02.03.2016 to 01.06.2021
4.	Thiru. A. Madesh	Krishnagiri, Kothapetta	Rough Stone	56/1(P-C)	3.06.00	Rc.No. 126/2010/ mines date: 27.10.2009	03.05.2010 to 02.05.2015

III. Details of Proposed quarries

Sl No	Name of the lessee	Village & Taluk	Mineral	S.F No.	Extent in Het	GO No.& Date	Lease period.


Deputy Director,
Dept of Geology and Mining,
Krishnagiri.


Copy to :-

The Chairman,
Tamil Nadu State Environment
Impact Assessment Authority,
3rd Floor, Panakal Maligai,
No. 1 Jeenes Road, Saidapet,
Chennai - 15.



சான்று

கிஷ்னகிரி டிவிஷன், கிஷ்னகிரி வட்டம், கிஷ்னகிரி
2 ஆ வட்டம், கிஷ்னகிரி ஹாஸ்டல் கிராமம்
ஹாஸ்டல் கோடு 78/1B (4.00.00000)ல்
அமைக்கப்பட்டிருக்கும் M/s Tmt, K.M. Vijaya W/o. D. Mathiyagham ஐ
சான்று 500 மீட்டர் சார்ஜ் அளவைக் கொண்டிருக்கும் நிலம், ஆடி, பிள்ளை,
பூங்கா, கீழ்வாடியை, வட்டும்பட்டி கிராமத்திற்கும், லேட்டிங்,
ஹாஸ்டல் கிராமத்திற்கும், ஹாஸ்டல் கிராமத்திற்கும், ஹாஸ்டல் கிராமத்திற்கும்,
சான்று, சான்று கிஷ்னகிரி ஹாஸ்டல் கோடு
ஹாஸ்டல் கிராமம் ஹாஸ்டல் சான்று கிஷ்னகிரி ஹாஸ்டல் கிராமம்.


08/02/2023
Village Administrative Officer
71, KRISHNAGIRI
KRISHNAGIRI.

TMT. K.M. VIJAYA, Rough stone quarry in the S.F.No.78/1B(P) over an extent of 4.00.0 ha. in Kothapetta Village, Krishnagiri Taluk, Krishnagiri District.

GENERAL VIEW OF THE LEASE AREA



(Deponent)

[Handwritten Signature]
08/02/2023
Village Administrative Officer
71, KRISHNAGIRI
KRISHNAGIRI.

From

Dr.S.Vediappan, M.Sc.,Ph.D.,
Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

To

Tmt. K.M. Vijaya,
W/o. D. Madhiazhagan,
D.No. 58B,Gandhi Nagar,
Krishnagiri Town,
Krishnagiri District - 635 001.

Roc.No. 1120/ 2020 /Mines Dated: 27 .01.2023.

Sir,

Sub: Mines and Minerals – Minor Mineral – Rough stone - Quarry lease for granted in favour of Tmt. K.M. Vijaya over an extent of 4.00.00 Hects of Patta land in S.F.No. 78/1B(P) of Kothapetta Village, Krishnagiri Taluk and District for a period of 10 years - Scheme of Mining submitted for the 2nd five year period 2023-2024 to 2027-2028 - Approved - Reg.

- Ref:**
1. The District Collector, Krishnagiri Proc. Roc. No.419/2017/ Mines dated: 30.05.2018.
 2. Mining plan approved by the Deputy Director of Geology and Mining, Krishnagiri in Roc.No.419/2017/Mines dated: 29.12.2017.
 3. The Assistant Director (Mines) Krishnagiri, Proc. Rc.No. 1120/2020/Mines dated: 26.04.2021.
 4. 1st Scheme of mining plan for the next five year period from 2023-2024 to 2027-2028 submitted by the lessee at District office on 13.01.2023.

Kind attention is invited to the references cited.

2) A quarry lease had been granted in favour of Tmt. K.M. Vijaya W/o. D. Madhiazhagan, to quarry Rough stone for a period of 5 years over an extent of 4.00.00 hecets of Patta land in S.F.No. 78/1B(P) of Kothapetta Village, Krishnagiri Taluk and District vide the District Collector, Krishnagiri Proc. Roc. No. 419/2017/Mines dated: 30.05.2018 under TNMMCR Rules 1959. The lease deed has been executed on 30.05.2018 and the lease period is valid upto 29.05.2023.

3) The Mining plan for the subject Rough stone quarry was approved by the Deputy Director of Geology and Mining, vide letter Rc. No. 419/2017/Mines Dated: 29.12.2017 which came into effect from the date of execution i.e. on 30.05.2018.

4) Meanwhile, the lessee Tmt. K.M. Vijaya W/o. Mathiazhagan has requested to extend the lease period for the said quarry lease from 5 years to 10 years as per G.O.(MS) No. 208 Industries (MMC.1) Department dated: 21.09.2020.

5) Based on the requeste of the lessee Tmt. K.M. Vijaya and report submitted by Assistant Geologist (Mines), Special Deputy Thasildhar (Mines), Special Revenue Insepctor (Mines) and Surveyor (Mines) the lessee was extended a further period of 5 years from the expiry of the existing lease period i.e. from 30.05.2023 vide Assistant Director (Mines) Proc. Rc.No. 1120/2020/Mines dated: 26.04.2021. Upto the period ending 30.05.2028.

6) In this regard, the lessee has submitted the scheme of mining for the next five years period from 2023-2024 to 2027-2028 (31.05.2023 to 30.05.2028).

7) As per the scheme of mining plan submitted for approval, it is mentioned that the total available geological reserves are calculated as 920148 Cbm with 95% recovery and after providing spaces for necessary benches the mineable reserves are calculated as 753546 Cbm @ 95% recovery upto a maximum of depth of 41m.

8) As per the Scheme of mining the year wise production for the proposed five years are as follows.

Year	Recoverable reserves @ (m ³)	Top Soil
30.05.2023 to 29.05.2024	226922	20711
30.05.2024 to 29.05.2025	158208	-
30.05.2025 to 29.05.2026	139874	-
30.05.2026 to 29.05.2027	122489	-
30.05.2027 to 29.05.2028	106053	-
Total	753546	20711

9) The lessee had obtained transport permits for a quantity of 1,11,600 Cbm of rough stone as against the proposed production of 10,80,884 Cbm (for the Mining plan period from 2018-19 to 2022-23). Upto 01.11.2022.

10) The lessee has obtained Environment Clearance from DEIAA vide Lr. No. 34/DEIAA-KGI/EC.No. 26/2018 dated: 27.02.2018. For a quantity of 10,80,884 Cbm of rough stone for the first five years.

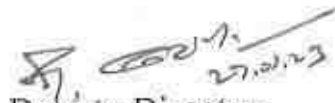
11) The draft Scheme of Mining submitted by Tmt. K.M. Vijaya has been scrutinized as per the guide lines/ Instructions issued by the Commissioner of Geology and Mining, Chennai-32. The Scheme of mining is prepared in accordance with the guidelines/ instructions issued.

12) Hence, in accordance with the TNMMCR 1959 and instructions issued by the Commissioner of Geology and Mining, Chennai, the said scheme of mining for the next five year period 2023-2024 to 2027-2028 (30.05.2023 to 29.05.2028) submitted by the lessee Tmt. K.M. Vijaya in respect of the area granted to quarry rough stone in Patta land S.F.No 78/1B (P) over an extent of 4.00.00 Hects is hereby approved subject to the following conditions.

- i. Based on the above details and in exercise of the powers conferred under Rule 41(9)(iii) of TNMMCR 1959 the scheme of mining submitted by Tmt. K.M. Vijaya W/o. D. Madhiazhagan, Krishnagiri is here by approved subject to the following conditions.
- ii. That the scheme of mining is approved without prejudice to any other law applicable to the quarry lease from time to time whether such laws are made by the Central Government, State Government or any other authority.
- iii. This approval of the scheme of mining does not in any way imply the approval of the Government in terms of any other provisions of Mines and Minerals Development and Regulation) Act 1957, or any other connected laws including Forest (Conservation) Act 1957, or any other connected Laws industry Forest (Conservation) Act 1980, Forest Conservation Rules 1981 Environment protection Act 1980, Indian Explosive Act 1884 (Central Act IV of 1884) and the rules made there under, Mineral Conservation and Development Rules 1988 and The Tamil Nadu Minor Mineral Concession rules, 1959.

- iv. This scheme of Mining including progressive mine closure plan is approved without prejudice to any other order or direction from any court of competent jurisdiction.
- v. Provisions of the Mines Act, 1952 and the Rules and Regulations made there under including submission of notice of opening, appointment of manager and other statutory officials as required under Mines Act, 1952 shall be complied with.
- vi. Provisions made under Mines and Minerals (Development and Regulation) Act, 1957, MMDR amendment Act, 2015 made there under shall be complied with.
- vii. This approval of scheme of mining is restricted to the mining lease area only. The mining lease area is as shown on the statutory plan under TNMMCR Rules, 1959.
- viii. The lessee should obtain environmental clearance from the appropriate authority.
- ix. The earlier instances of irregular/illegal quarrying, if any shall not be regularized through the approval of this document.
- x. The lessee shall remit the penalty/ cost of mineral/ other dues if any as arrived by the District Collector/ Deputy Director of Geology and Mining, Krishnagiri District.
- xi. Non adherence to any condition set-out above, the approval shall be deemed to have been withdrawn with immediate effect.

Encl: 1.Scheme of Mining Plan 3 Copies.


Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

Copy to :-

The Chairman,
Tamil Nadu State Environment
Impact Assessment Authority,
3rd Floor, Panakal Maligai,
No. 1 Jeenes Road, Saidapet, Chennai -15.

SCHEME OF MINING
WITH
PROGRESSIVE MINE CLOSURE PLAN
FOR
ROUGH STONE QUARRY



(Prepared Under Rule 12 of MMCDR 1988 (as amended upto 02.08.2011)
& as per the amendments Under Rule 41 & 42 of TNMMCR, 1959)

PERIOD OF SCHEME OF MINING WITH PMCP: 2023-2024 to 2027-2028

EXTENT	:	4.00.0 HA.
S.F.No.	:	78/1B (PART)
VILLAGE	:	KOTHAPETTA
TALUK	:	KRISHNAGIRI
DISTRICT	:	KRISHNAGIRI
STATE	:	TAMIL NADU

LESSEE
TMT. K. M. VIJAYA,
W/o. D. MATHIAZHAGAN,
D. No.58B, GANDHI NAGAR,
KRISHNAGIRI TOWN,
KRISHNAGIRI DISTRICT- 635 001.

PREPARED BY :
S. DHANASEKAR, M.SC.,
QUALIFIED PERSON,
NO. 5/30-7 B, AVVAI NAGAR,
PONKUMAR MINES ROAD,
JAGIR AMMAPALAYAM,
SALEM DISTRICT – 636 302.
E-mail: geodhana@yahoo.co.in
CELL: 98946 26970 & 7373374702.

Tmt. K. M. Vijaya,
W/o. D. Mathiazhagan,
D. No.58B, Gandhi Nagar,
Krishnagiri Town,
Krishnagiri District- 635 001.



CONSENT LETTER FROM LESSEE

I hereby give my consent for preparing the Scheme of Mining with Progressive Mine Closure Plan in respect of Rough Stone Quarry over an extent of 4.00.0 Ha. in S.F. No.78/1B (Part) of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu State has been prepared by **Shri S. DHANASEKAR, M.Sc.**, Qualified Person.

I request the Department of Geology and Mining, Krishnagiri to make further correspondence regarding modification of the Scheme of Mining with Progressive Mine Closure Plan with the said Qualified Person in his following Address:

S.DHANASEKAR, M.Sc.,

Qualified Person

No.5/30-7B, Avvai Nagar,

Ponkumar Mines Road,

Jagir Ammapalayam,

Salem District-636 302.

E-mail: geodhana@yahoo.co.in

Cell: 98946-28970

I hereby undertake that all the modifications, if any, made in the Scheme of Mining with Progressive Mine Closure Plan by the Qualified Person may be deemed to have been made with our knowledge and consent and shall be acceptable to me and binding on me in all respects.

A handwritten signature in black ink, appearing to read 'K.M. Vijaya'.

(K.M. Vijaya)

Signature of the Lessee

Place: KRISHNAGIRI

Date:

Tmt. K. M. Vijaya,
W/o. D. Mathiazhagan,
D. No.58B, Gandhi Nagar,
Krishnagiri Town,
Krishnagiri District- 635 001.

DECLARATION OF THE MINE OWNER

I hereby declare that the Scheme of Mining with Progressive Mine Closure Plan in respect of Rough Stone Quarry over an extent of 4.00.0 Ha. in S.F. No.78/1B (Part) of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu State has been prepared in full consultation with us by **Shri S. DHANASEKAR, M.Sc.**, Qualified Person. I have understood its contents and agree to implement the same in accordance with Laws applicable to mines.



(K.M. Vijaya)
Signature of the Lessee

Place: KRISHNAGIRI

Date:

S.Dhanasekar.M.Sc.,(Geol),
Qualified Person,

No.5/30-7B, Avvai Nagar,
Ponkumar Mines Road,
Jagir Ammapalayam, 27 JAN 2023
Salem- 636 302.

CERTIFICATE

This is to certify that, the provisions of Minor Minerals Conservation and Development Rules, 2010 (MMCDR) have been observed in the Scheme of Mining with Progressive Mine Closure Plan for Kothapetta Rough Stone Quarry over an extent of 4.00.0 Ha. in S.F. No.78/1B (Part) of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District prepared for Tmt. K. M. Vijaya, W/o. D. Mathiazhagan, D.No.58B, Gandhi Nagar, Krishnagiri Town, Krishnagiri District- 635 001.

Whenever specific permissions, approvals, exemptions or relaxations are required, the lessee will approach the concerned authorities of Directorate General of Mines Safety (DGMS), 4th B Block, 100, No.5, 14th Main, 100 Feet Road, Koramangala, Bangalore, Karnataka- 560 034, for such permissions, exemptions, relaxations and approvals.

It is also certified that the information furnished in the above Scheme of Mining with Progressive Mine Closure Plan are true and correct to the best of our knowledge.

Certified

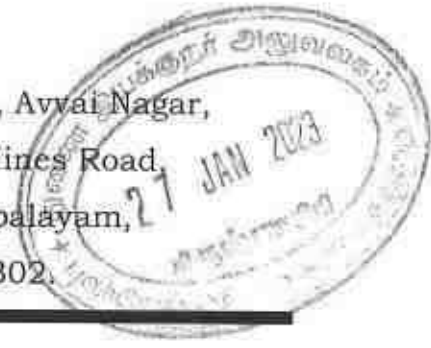

Signature of Qualified Person.
S.DHANASEKAR, M.Sc.,(Geo)
Qualified Person

Place: SALEM

Date:

S.Dhanasekar.M.Sc.,(Geol),
Qualified Person,

No.5/30-7B, Avvai Nagar,
Ponkumar Mines Road,
Jagir Ammapalayam,
Salem- 636 302.



CERTIFICATE

Certified that provision of Mines Act, Rules and Regulations and orders made there under have been observed in the Scheme of Mining with Progressive Mine Closure Plan for Kothapetta Rough Stone Quarry over an extent of 4.00.0 Ha. in S.F. No. 78/1B (Part) of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District prepared for Tmt. K.M. Vijaya, W/o. D. Mathiazhagan, D.No.58B, Gandhi Nagar, Krishnagiri Town, Krishnagiri District- 635 001.

Whenever specific permissions, approvals, exemptions or relaxations are required, the lessee will approach the concerned authorities of the Director General of Mines Safety (DGMS), 4th B Block, 100, No.5, 14th Main, 100 Feet Road, Koramangala, Bangalore, Karnataka- 560 034, for such permissions, exemptions, relaxations and approvals.

It is also certified that information furnished in the above Scheme of Mining with Progressive Mine Closure Plan are true and correct to the best of our knowledge.

Certified


Signature of Qualified Person.
S.DHANASEKAR, M.Sc.,(Geo)
Qualified Person

Place: SALEM

Date:



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ANNEXURES

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11.	Copy of Qualification Certificate	XI
12.	Copy of Experience Certificate	XII
13.	Copy of Lease Area Photos	XIII



LIST OF PLATES

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1.	Location Plan	I	Not to scale
2.	Route Map	IA	Not to scale
3.	Topo Sheet Map of the Lease Area	IB	1:50,000
4.	Satellite Image (Lease Area)	IC	1:2000
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6.	Mine Lease Plan	II	1:1000
7.	Surface and Geological Plan	III	1:1000
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9.	Year wise Development and Production Plan	IV	1:1000
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**SCHEME OF MINING
WITH
PROGRESSIVE MINE CLOSURE PLAN
FOR
KOTHAPETTA ROUGH STONE QUARRY**



(Prepared Under Rule 12 of MCDR, 1988(as amended upto 02.08.2011) & as per the
amendments Under Rule 41 & 42 of TNMMCR, 1959)

1.0 General:

The Scheme of Mining along with Progressive Mine Closure Plan has been prepared in respect of Rough Stone Quarry in Patta Land S.F.No.78/1B (Part) over an extent of 4.00.0 Ha. in Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, prepared for Tmt. K. M. Vijaya, W/o. D. Mathiazhagan, D.No.58B, Gandhi Nagar, Krishnagiri Town, Krishnagiri District - 635 001.

The fresh Mining Plan was approved by Deputy Director, Geology and Mining, Krishnagiri vide letter Roc No. 419/2017/Mines dated: 29.12.2017 for a period of five years from 2018-2019 to 2022-2023. Please refer Annexure-X. Copy of Approved Mining plan Letter.

Accordingly, the Lessee had obtained Environmental Clearance from DEIAA-KGI vide order Lr. No.34/DEIAA-KGI/Ec.No.26/2018 dated 27.02.2018. Please refer Annexure- III.

The Mining Lease was granted Vide Proceeding No. Proc.No. 419/2017/Mines dated 30.05.2018 for a period of Five years.

The lease deed was executed on 30.05.2018. Mining operation commenced on 01.06.2018. The lease will expire on 29.05.2023.

However as per the recent Amendment TNMMCR, G.O.(Ms)No.208 Industries (MMC.1) Department dated 21.09.2020, the lease period will be extended for another five years subject to the condition that the approved scheme of mining must be submitted along with the prescribed form in **Appendix VI.**

This Scheme of Mining for the period 2023-2024 to 2027-2028 is now being prepared and submitted under Rule 12 of MMCDR, 2010 and 41 & 42 of TNMMCR, 1959 for approval.

The mining operations are done by opencast semi-mechanized methods with jack hammer drilling and blasting, hydraulic excavators are used for loading the Rough stone from pithead to the needy crushers.


S.DHANASEKAR, M.Sc.,(Gao)
Qualified Person



1.1. Review of Mining Plan:

a) Name of lessee : Tmt. K.M. Vijaya,
Address : W/o. D. Mathiazhagan,
D.No.58B, Gandhi Nagar,
Krishnagiri Town,
Krishnagiri District.
District : Krishnagiri
State : Tamil Nadu
Pin code : 635 001.

b) Status of lessee

The lessee is an Individual.

c) Mineral(s) which is / are included in the prospecting license (For Fresh grant):

-Nil-

d) Mineral(s) which is / are included in the letter of Intent / lease deed:

Rough Stone occurs in the lease area and the Lessee intends to quarry the same.

e) Mineral(s), which is the lessee, intends to Quarry:

Rough Stone occurs in the lease area and the Lessee intends to quarry the same.

f) Name and Address of the Qualified Person:

Name : SHRI S. DHANASEKAR, M.Sc.,
Address : Qualified Person
No.5/30 7B, Avvai Nagar,
Ponkumar Mines Road
Jagir Ammapalayam,
Salem – 636 302.

Cell No. : 98946-28970 & 73733-74702.

Email : geodhana@yahoo.co.in

2.0 LOCATION AND ACCESSIBILITY

a) Lease Details (Existing Quarry)

Name of the Quarry : Kothapetta Rough Stone Quarry
Latitude of boundary point : 12° 32' 42.0172" N to 12° 32' 44.4928" N
Longitude of boundary point : 78° 12' 54.6408" E to 78° 12' 42.8804" E
Date of grant of lease : 30.05.2018
Period/Expiry Date : 29.05.2023.
Name of leaseholder : Tmt. K. M. Vijaya,
Postal Address : W/o. D. Mathiazhagan,
D.No.58B, Gandhi Nagar,
Krishnagiri Town,
Krishnagiri District - 635 001.
Tamil Nadu.

b) Details of lease area with location map (Quarry)**Table-1**

Forest (specify)	Area (Ha.) -NIL-	i) Waste land	Nil
		ii) Grazing land	Nil
		iii) Agriculture land	Nil
		iv) Others, Patta Land (specify)	4.00.0 Ha.

Total lease area : 4.00.0 Ha
 State : Tamil Nadu
 District : Krishnagiri
 Taluk : Krishnagiri
 Village : Kothapetta
 Whether the area is recorded to be in forest : This is Patta Land and is not covered in Forest area of any kind.

Please refer Location Plan and Mine lease plan – Plate No. I & II.

c) Existence of public road/railway line, if any nearby and approximate distance:

Extent of the area is shown in the FMB. The District Head Quarter Krishnagiri is at a distance about 3.0 Km. from quarry site. The area is at a distance of about 2.0 kms from Krishnagiri Village. Krishnagiri – Hosur Main Road (NH-44) is at a distance of about 1.2 kms Western side of the lease area.

Nearest Railhead is Rayakkottai Railway Station that is located about 29.3 kms from the Quarry. Post office are available in Krishnagiri at a distance of about 3.6Kms. Police Station are available in Krishnagiri at a distance of about 8.6 Kms. Air Port is available in Bangalore, about 120.0 kms. from the Quarry. Nearest Port is Chennai about 259.0 kms. from the area.

d) The Mining lease area is bounded by four corners and the coordinates are:**Table No:2**

Toposheet No	: No. 57 – L/2
Latitude	: 12° 32' 42.0172" N to 12° 32' 44.4928" N
Longitude	: 78° 12' 54.6408" E to 78° 12' 42.8804" E
North East	: 12° 32' 44.2270" N 78° 12' 52.8233"E
South East	: 12° 32' 38.8787" N 78° 12' 52.1976"E
North West	: 12° 32' 44.4928" N 78° 12' 42.8804"E
South West	: 12° 32' 40.3676" N 78° 12' 48.3030"E

e) A general location map showing area and access routes. It is preferred that the area be marked on a Survey of India topographical map or a cadastral map or forest map as the case may be. However, if none of these are available, the area may be shown on an administrative map:

A general location map showing area boundaries and existing access routes shown on the Toposheet Plan (Key Plan) which is enclosed as Plate No.Ib. Since existing routes are being followed to reach the lease area no fresh access routes are proposed hence not shown.

Top Sheet No. : **Topo Sheet No.57 L/2**
Latitude : **12° 32' 42.0172" N to 12° 32' 44.4928" N**
Longitude : **78° 12' 54.6408" E to 78° 12' 42.8804" E**

f) Land use pattern:

Dry Mineral bearing land.

g) Location of the Area:

The Kothapetta Rough Stone Quarry is over an extent of 4.00.0 Ha. in S.F.No.78/1B (Part), Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamilnadu State.

3.0 DETAILS OF APPROVED MININGPLAN/SCHEME OF MINING:

3.1 Date and reference of earlier approved MP:

The fresh Mining Plan was approved by Deputy Director, Department of Geology and Mining, Krishnagiri vide letter Roc No. 419/2017/Mines dated 29.12.2017 for a period of five years 2018-2019 to 2022-2023. Please refer Annexure-X. Copy of Approved Mining plan Letter.

3.2 Details of last modifications if any (for the previous approved period) of approved MP/SOM, indicating date of approval, reason for modification:

-Nil-

3.3 Give review of earlier approved proposal (if any) in respect of exploration, excavation, reclamation etc:

i) Exploration:

In the previous approved Mining Plan, it was mentioned that no exploration was carried out. Massive rough stone exposures were clearly visible in the lease area.

Present Mine working had reached a depth of about 12.0m.

There is only one working pit available in this area, the dimension of which is given below.

Table No.3

Existing Pit Details
95.0m(L)Avg X 93.0m(W) Avg X 12.0m(D)Avg



The area is very small. The attitude of the deposits like width and length are clearly known. Depth persistence of Rough Stone in this area is already proved upto 12.0m.

ii) Mine Development:

The Mine workings have reached a depth of nearly 12.0m. Development of the pits has been done only in the areas where the Rough Stone could be easily mined.

iii) Exploitation:

The Quarry workings have reached a depth of nearly 12.0m.

There is only one working pit, the dimension of which is given below:

Table No.4

Existing Pit Details
95.0m(L)Avg X 93.0m(W) Avg X 12.0m(D)Avg

The Planned and Actual Production for last approved Mining Plan period figures are given as follows:

Table No.5

YEAR	PLANNED(Cu.m) ROUGH STONE	ACTUAL(Cu.m) ROUGH STONE
30.05.2018 - 29.05.2019	216863	18000
30.05.2019 - 29.05.2020	216298	27600
30.05.2020 - 29.05.2021	217601	28000
30.05.2021 - 29.05.2022	214476	24000
30.05.2022 - 29.05.2023 (01.11.2022)	215646	8400
TOTAL	1080884	106000

iv) Waste Management:

In the Previous approved Mining Plan Period, the mine waste has been used for roads in the low laying adjacent area.

v) Reserves and Resources estimated in the earlier approved mining plan period (2018-2019 to 2022-2023) with grade:

Geological Reserve (insitu) under Proved category : 2387000 cu.m
Mineable Reserve : 1137773 cu.m
Year wise Production : 1080884 cu.m



While calculating Mineable Reserve, the boundary barrier and bench width, height and slope are taken into account. Hence, the Mineable Reserve will be always less than the insitu reserve.

vi) Depletion of Reserve:

The actual production of Rough Stone for the last five years (2018-2019 to 2022-2023) is about 106000 cu.m of saleable Rough Stone.

vii) Afforestation and Reclamation:

Presently, lessee had planted some trees in the lease area in scattered manner. Since, the Quarry is active. Mining should be carried out in such a manner that after certain period, some part is available for reclamation.

viii) Control of Dust, Noise & Ground Vibrations:

Quarrying of Rough Stone had been carried out by drilling and control blasting by using low power explosives, and hence, noise will be very minimum.

The dust control was taken care by water sprinkling on the haul roads. The amount of ground vibration is very less since only control blasting by using low power explosives is used.

Reclamation & Rehabilitation:

Reclamation of mined out area does not arise and has not reached the full extent of working. After closure of the Mine, the pit will be allowed to collect seepage and rain water. This will help to charge the nearby agricultural wells.

PART - 'A'

1.0 GEOLOGY AND EXPLORATION

A) Briefly Describe the Topography, Drainage Pattern, Vegetation, Climate, Rainfall Data of the Area Applied/Mining Lease Area:

a) Topography:

The Mining Lease area is approximately at 12° 32' 42.0172" N to 12° 32' 44.4928" N latitude and 78° 12' 54.6408" E to 78° 12' 42.8804" E longitude and is represented by Topo Sheet No.57 L/2 of Survey of India.

The lease area is a slightly elevated terrain and sloping towards North Eastern side. The general trend of formation is NE – SW and dip towards SE-70°. The altitude of the area is about 537 MSL.

Vegetation:

It is a dry Mineral bearing. It is a dry place with a Gravel cover of about 1.0m.

Water table and Drainage Pattern:

Water table is touched at a depth of 76m in rainy season, ie. during North-East monsoon and at 82m in summer months. The water table fluctuation is verified by observing the water levels in the above seasons in the nearby wells.

Climatic Conditions:

The area receives rainfall of about 800mm to 900mm per annum and the rainy season is mainly from October-January during Northeast Monsoon. The summer is hot with maximum temperature of 38⁰C and winter encounters a minimum temperature of 18⁰C.

Rainfall Data:

The area receives scanty rainfall and the annual rainfall of the area varies between 800mm to 900mm.

b) Geology of the Area:

The lease area is slightly elevated topography, the area has been quarrying operation earlier. Rough stone exposures are clearly visible in existing pit within the lease applied area. Gravel are noticed at the average thickness of 1m. The slope is gentle towards North Eastern side. The altitude of the area is above 537m from MSL.

Peninsular gneiss forms the oldest rock formations, in which the massive formation of charnockite lies over with rich accumulation of recent quaternary formation. On regional scale the charnockite body trends NE-SW with dipping towards SE70⁰.

The general geological sequences of the rocks in this area are given below

AGE	FORMATION
Recent	Quaternary Recent (Gravel)
Archaean	Charnockite (Granitoid Gneiss)
	Peninsular Gneiss Complex II.

c) Details of Exploration already carried out:

The area was thoroughly explored by the Qualified Person and his geological team. Massive rough stone exposures are clearly visible from the existing pit within the lease area.

In this area, the mine working has reached a depth of about 12.0m.

There is only one working pit available in this area, the dimension of which is given below:

Table No.6

Existing Pit Details
95.0m(L)Avg X 93.0m(W) Avg X 12.0m(D)Avg

The area is very small. The attitude of the deposits like width and length are clearly known.

Depth persistence of Rough Stone in this area is already proved upto 12.0m.

d) The Physical Character of the Rough Stone:

Rough stone texture is medium to coarse grained and is composed of recrystallized minerals, hence it is a metamorphic rock. The grains are subhedral, inequigranular, with a granoblastic texture. The grains are crystalline ie. Complete crystallization has occurred. Cleavage is absent. The color is dark olive green. The details collected during the field survey and found to be sufficient for the preparation of the Scheme of Mining with PMCP.

e) Number of boreholes indicating type (Core/RC/DTH), diameter, spacing, inclination, Collar level, depth etc... with standard bore hole logs duly marking on

Nil

i)RESERVES :

a. Method of Estimation of Reserves:

The Geological and Recoverable reserves are estimated by cross sectional method up to a depth of 41.0m (1.0m Gravel+ 40.0m Rough Stone. In the earlier plan instead of mentioning the topography as elevated land by tacking contour map it was mentioned as deposit having thickness of 25 meters above ground level. But in the field, it is revealed that there is no deposit above ground level, but it is an elevated terrain. Plans and Sections have been drawn with a scale of 1:1000 respectively.

Selecting a method of reserve estimation depends upon the geology of the mineral deposit, exploration method, purpose of computation and the required degree of accuracy and also on the contemplated mining system.

The ideal method should be simple, rapid, reliable, consistent with the character of the mineral body and available data and suitable for rapid checking. The method adopted for calculation of reserves in this area is by computing the volume by cross sectional method upto a particular level. The volume is calculated by multiplying the cross-sectional area with the length of the sectional influences.

The details of estimation of Geological Reserves and Mineable Reserves with reference to the Geological Plan & Cross section and Conceptual Plan & Section as shown in (Plate No.III &III-A and VII & VII-A) respectively.

b. GEOLOGICAL RESERVES:

The Geological reserve of Rough Stone and Gravel is calculated upto a depth of 41.0m (1.0m Gravel + 40.0m Rough Stone). In the earlier plan instead of mentioning the topography as elevated land by taking contour map it was mentioned as deposit having thickness of 25 meters above ground level. But in the field it is revealed that there is no deposit above ground level, but it is an elevated terrain. Total Geological reserve is estimated at **1604820 Cu.m** by area cross sectional method.

Table No.7

GEOLOGICAL RESERVES								
Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Geological Reserves in m3 @ 95%	Mine waste in m3 @ 5%	Gravel in m3
XY-AB	I	164	140	1				22960
	II	164	140	5	114800	109060	5740	
	III	197	140	5	137900	131005	6895	
	IV	197	140	5	137900	131005	6895	
	V	197	140	5	137900	131005	6895	
	VI	197	140	5	137900	131005	6895	
	VII	197	140	5	137900	131005	6895	
	VIII	197	140	5	137900	131005	6895	
	IX	197	140	5	137900	131005	6895	
TOTAL					1080100	1026095	54005	22960
XY-CD	III	112	49	5	27440	26068	1372	
	IV	112	148	5	82880	78736	4144	
	V	112	148	5	82880	78736	4144	
	VI	112	148	5	82880	78736	4144	
	VII	112	148	5	82880	78736	4144	
	VIII	112	148	5	82880	78736	4144	
	IX	112	148	5	82880	78736	4144	
TOTAL					524720	498484	26236	
GRAND TOTAL					1604820	1524579	80241	22960

Gravel = 22960 cu.m

Total Geological Reserves in ROM = 1604820 cu.m

Recoverable Reserves @ 95% = 1524579 cu.m

Mine waste @ 5% = 80241 cu.m

C. MINEABLE RESERVES:

The Mineable reserves are calculated by deducting 7.5m Safety distance and Bench Loss. The Mineable Reserve is calculated upto a depth of 41.0m (1.0m Gravel+ 40.0m Rough Stone).



Table No.8

MINEABLE RESERVES								
Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Mineable Reserves in m3 @ 95%	Mine waste in m3 @ 5%	Gravel in m3
XY-AB	I	149	139	1				20711
	II	148	137	5	101380	96311	5069	
	III	176	127	5	111760	106172	5588	
	IV	171	117	5	100035	95033	5002	
	V	166	107	5	88810	84370	4440	
	VI	161	97	5	78085	74181	3904	
	VII	156	87	5	67860	64467	3393	
	VIII	151	77	5	58135	55228	2907	
	IX	146	67	5	48910	46465	2445	
TOTAL					654975	622227	32748	20711
XY-CD	III	105	49	5	25725	24439	1286	
	IV	100	133	5	66500	63175	3325	
	V	95	123	5	58425	55504	2921	
	VI	90	113	5	50850	48308	2542	
	VII	85	103	5	43775	41586	2189	
	VIII	80	93	5	37200	35340	1860	
	IX	75	83	5	31125	29569	1556	
TOTAL					313600	297921	15679	
GRAND TOTAL					968575	920148	48427	20711

- Gravel = 20711 cu.m
- Total Mineable Reserves in ROM = 968575 cu.m
- Recoverable Reserves 95% = 920148 cu.m
- Mine waste @ 5% = 48427 cu.m

The geological reserves computed based on the geological cross sections up to the economically workable depth of 41m (1.0m Gravel + 40.0m Rough Stone) works out to **1524579cu.m (95% recovery)** (Table-7) and mineable reserves have been computed as **920148 cu.m** (Table-8) at the rate of **95%** recovery upto a depth of 41.0m (1.0m Gravel+ 40.0m Rough Stone). (Refer plate No.VII & VII-A). The above projections are for the Next Five years plan period.

Mineable reserves have been computed as 920148 cu.m at the rate of 95% recovery up to a depth of 41m (1.0m Gravel+ 40.0m Rough Stone). The Mineable reserves are calculated by deducting 7.5m Safety distance & Bench Loss.

2.0 MINING

A. Open Cast Mining

a) Briefly describe the existing as well as proposed method for excavation with all design parameters indicating on plans / sections:-

Existing method:

The mining operations are done by opencast semi-mechanized methods with jack hammer drilling and blasting, hydraulic excavators are used for loading the Rough stone from pithead to the needy crushers.

There is only one existing working pit, the dimension of which is given below :

Table No.9

Existing Pit Details
95.0m(L) Avg X 93.0m(W) Avg X 12.0m(D)Avg

Proposed method :

The quarry is proposed to carry out mining operation with semi-mechanized opencast method ("B2" category of small mine). The quarry operation involves shallow jack hammer drilling, slurry blasting, excavation, loading and transportation of Rough Stone.

As Instructed in the Environmental Clearance, the working hours were restricted between 7AM & 5PM (Present working hours 8AM to 4PM with a total working hours of 8 hours including lunch break). The operation will be confined to general shift only ie. from 8.00 AM to 4.00 PM with one hour lunch interval between 12.00 PM to 1.00 PM.

In Gravel, a bench will be 1.0m height and width with 45° slope.

The Rough Stone, totally six benches will be of 5.0m height and 5.0m width for next Five years only. Please refer Plate No. IV & IV-A. The advancement of the pit will be from boundary towards middle side of the lease area for the next Five years. Please refer Plate No.IV.

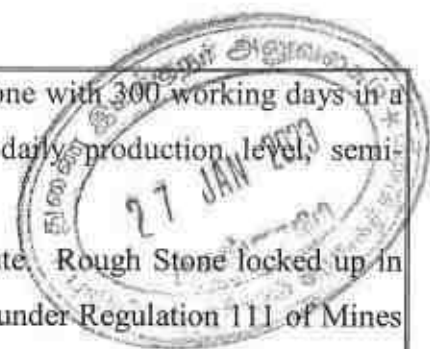
A bund will be constructed around the pit to prevent accident call and inrush of rainwater. Proper footpaths are provided between benches for easy accessibility for workers.

Haul roads, to conform to statutory standards are made according to convenience for smooth transport of Rough stone and waste. Wherever necessary, crossing platforms are provided in the haul roads at suitable point for safe crossing as tractors, tippers, trucks etc.

The Gravel formation will be removed and hydraulic excavators are used for loading the gravel into the tipper from pit head to needy buyers. This will be done only after obtaining permission and paying necessary seigniorage fees to the Government.

Average annual production is about 150709 cum of Rough Stone with 300 working days in a year. Considering the nature of the deposit and the anticipated daily production level, semi-mechanized mining is proposed.

A boundary barrier of 7.5m width are maintained as per statute. Rough Stone locked up in this barrier will be excavated after obtaining permission from DGMS under Regulation 111 of Mines and Mineral Regulation, 1961. The sequence of working for the next Five years is indicated in Plate Nos. IV and the rate of production is given in Table No.11.



b) Indicate Year-Wise Tentative Excavation in Cu.m indicating Production & development, ROM, pit wise as in table below.

i) Planned Development for next Five years is given below :

Gravel of the lease area is 20711m³. Gravel formation will be removed and hydraulic excavators are used for loading the gravel into the tipper from pit head to needy buyers. This will be done only after obtaining permission and paying necessary seigniorage fees to the Government.

ii) Planned Production for next Five years is given below :

The proposed rate of production of **Rough Stone** is about **753546 cu.m** for **Five Years** at the rate of 95% recovery up to **31m** depth (1m Gravel+ 30m Rough Stone).

Table No.10

Year	ROM Cu.m	Production 95% (cu.m)
30.05.2023 - 29.05.2024	238865	226922
30.05.2024 - 29.05.2025	166535	158208
30.05.2025 - 29.05.2026	147235	139874
30.05.2026 - 29.05.2027	128935	122489
30.05.2027 - 29.05.2028	111635	106053
TOTAL	793205	753546

From Total ROM the Rough Stone deposits are categorized with the following percentage.
Rough stone: 95% .

The average production of Rough Stone per year will be about 150709 cu.m. Please refer Table No.11 and Plate No.IV.

YEARWISE DEVELOPMENT & PRODUCTION SCHEDULE FOR NEXT FIVE YEARS

The proposed rate of production of **Rough Stone** is about **753546cu.m** for **Five Years**. The average proposed rate of production of **Rough Stone** is about **150709cu.m**. at the rate of 95% recovery up to a **31m** depth (1m Gravel+ 30m Rough Stone).

The proposed Production & development for next Five years 2023-2024 to 2027-2028 are given below :

Table – 11

YEARWISE DEVELOPMENT AND PRODUCTION									
Year	Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Recoverable Reserves in m3 @ 95%	Mine waste in m3 @ 5%	Gravel in m3
30-05-2023 29-05-2024	XY-AB	I	149	139	1				20711
		II	148	137	5	101380	96311	5069	
		III	176	127	5	111760	106172	5588	
	XY-CD	III	105	49	5	25725	24439	1286	
TOTAL						238865	226922	11943	20711
30-05-2024 29-05-2025	XY-AB	IV	171	117	5	100035	95033	5002	
	XY-CD	IV	100	133	5	66500	63175	3325	
TOTAL						166535	158208	8327	
30-05-2025 29-05-2026	XY-AB	V	166	107	5	88810	84370	4440	
	XY-CD	V	95	123	5	58425	55504	2921	
TOTAL						147235	139874	7361	
30-05-2026 29-05-2027	XY-AB	VI	161	97	5	78085	74181	3904	
	XY-CD	VI	90	113	5	50850	48308	2542	
TOTAL						128935	122489	6446	
30-05-2027 29-05-2028	XY-AB	VII	156	87	5	67860	64467	3393	
	XY-CD	VII	85	103	5	43775	41586	2189	
TOTAL						111635	106053	5582	
GRAND TOTAL						793205	753546	39659	20711

Gravel = 20711 cu.m

Total Reserves = 793205 cu.m

Recoverable Reserves @ 95% = 753546 cu.m

Mine waste @ 5% = 39659 cu.m

ROM: The material excavated from mineralized zone and includes mineral reject and useable mineral component.

OB: Means overburden capping waste.

iv) Estimated Life of the quarry

Mineable ROM = 968575 cu.m

Mineable Reserves @ 95% = 920148 cu.m

Average production (Rough Stone) per year @ 95% = 150709 cu.m

Estimated Life of the Quarry = $920148 / 150709$ = 6.0 years

Life = 6 years

The average proposed rate of production of Rough Stone is about **150709cu.m** per year.

v) Proposed Rate of Production When The Quarry Is Fully Developed

The proposed rate of production when the quarry is fully developed is 753546m^3 for next Five years and 150709m^3 per annum. (Table-11) The production schedule for the subsequent five year is drawn mainly in consideration of reserves position, market demand and the cost of production.

vi) Mineable Reserves and Anticipated Life of Mine

The Rough Stone is Massive in nature. The depth persistence of the Rough Stone will be beyond the economically workable depth. An optimum depth of 41.0m (1.0m Gravel+ 40.0m Rough Stone) for entire lease period has been established as economically viable depth. Eventually this depth is the optimum depth for safe and scientific quarrying.

The mineable reserves are calculated by excluding the mining loss due to formation of benches, ultimate depth of mine, the mineral reserve held up within the safety distances all along the boundary of quarry lease applied area.

The mineable reserves for this Rough stone is thus arrived as 920148cu.m (Table-8) for an assumed depth of 41m from top surface (1.0m Gravel + 40.0m Rough Stone). The details of estimation of five years development & production plan (plate no. IV) is furnished in Table-11. The average rate of production of Rough Stone from this quarry is 150709 cu.m per year and mineable recoverable reserves 920148cu.m .

Based on the above, and taking into consideration of the available Mineable Reserves, **the life of mine will be about 6 years**, if the quarry is being worked continuously with prevailing market conditions and according to this Scheme of mining period.

c). Composite development plans showing pit layouts, dumps, stacks of mineral reject, if any, etc. and year wise sections in case of 'B' category mines:

A composite development year wise Plan and Sections are shown in Plate Nos. IV & IV-A. The details are furnished in Table-11. The average annual production of Rough Stone per year will be about 150709 cu.m .

d). Describe briefly giving salient features of the proposed method of working Indicating Category of mine:

The quarry is proposed to carry out mining operation with semi-mechanized opencast method ("B2" category of small mine). The quarry operation involves shallow jack hammer drilling, slurry blasting, excavation, loading and transportation of Rough Stone. The removal of blasted Rough Stone material is loaded into 10 MT capacity trucks with the help of hydraulic excavators.

Extent of Mechanization:

The mine will be worked by semi-mechanized method. However for drilling and hauling, jack hammers, hydraulic excavators and tippers will be used respectively.

Drilling Machines :

Drilling of shot holes will be carried out using compressor and jack hammer. Depth of holes shall be 1 to 2m bench height and spacing shall be 0.75m and burden shall be 0.60m from the preface.

Details of drilling equipments are given below.

Table No.12

Type	Nos	Dia of hole	Size / Capacity	Make	Motive power	H.P.
Jack Hammer	5	25.5 mm	Hand held	Atlas copco 2Nos	Diesel	60

Loading Equipment:

Loading of rough stone shall be carried out by 10 tonne capacity tippers by Hydraulic Excavator from the working place periodically. Details of loading equipment are given as under.

Table No.13

Type	Nos	Bucket Capacity (MT)	Make	Motive power	H.P.
Hydraulic excavator	2	1.2 M ³	L&T or Ex200	Diesel	120

Transportation:

Transport of raw materials and waste shall be done by Tipper of 10 M.T. capacity.

Table No.14

Type	Nos	Size / Capacity	Make	Motive power	H.P.
Tipper	3	10 M.T	Ashok Leyland	Diesel	110

Miscellaneous :

There is no other miscellaneous operation worth mentioning except drilling by jack hammer, working of Rough stone deposit by opencast semi-mechanized methods, transport of Rough stone by tippers and trucks and pumping out seepage water during rainy season.

Afforestation :

The safety distance along the boundary has been identified to be utilized for afforestation purpose. Yearly 100 Neem trees will be planted in this lease area. These trees will be planted along the boundary line, (Please refer Plate No.V for Mine layout, Land use and Afforestation Plan).

The soil will be spread over the same and vegetative cover with suitable species will be provided. The extent of area to be afforested in next Five years is 0.56.0 Ha. interval between trees – 5m, survival rate – 60%. A retaining wall will be constructed around the dumping yard.

The Afforestation programme for the next Five years are described as follows :

Table No. 15

Year	Name of the species	No. of species	Interval	Area in Ha.	Survival rate
2023-2024	Neem	100	5m	0.11.0	60%
2024-2025	Neem	100	5m	0.11.0	60%
2025-2026	Neem	100	5m	0.11.0	60%
2026-2027	Neem	100	5m	0.11.0	60%
2027-2028	Neem	100	5m	0.12.0	60%
TOTAL		500		0.56.0	

e). Describe briefly the layout of mine workings, pit road layout, the layout of faces and sites for disposal of Topsoil/waste along with ground preparation prior to disposal of waste, reject etc. A reference to the plans and sections may be given. UPL or ultimate size of the pit is to be shown for identification of the suitable dumping site:

The quarry is proposed to carry out mining operation with semi-mechanized opencast method ("B2" category of small mine). The quarry operation involves shallow jack hammer drilling, slurry blasting, excavation, loading and transportation of Rough Stone.

As Instructed in the Environmental Clearance, the working hours were restricted between 7AM & 5PM (Present working hours 8AM to 4PM with a total working hours of 8 hours including lunch break). The operation will be confined to general shift only ie. from 8.00 AM to 4.00 PM with one hour lunch interval between 12.00 PM to 1.00 PM.

The Rough Stone, totally six benches will be 5.0m height and 5.0m width for next Five years only. Please refer Plate No. IV & IV-A. The advancement of the pit will be from boundary towards middle side of the lease area for the next Five years. Please refer Plate No.IV.

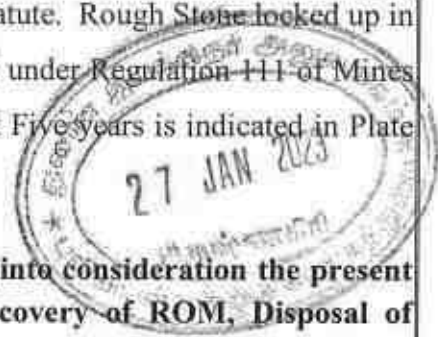
A bund will be constructed around the pit to prevent accident call and inrush of rainwater. Proper footpaths are provided between benches for easy accessibility for workers.

Haul roads, to conform to statutory standards are made according to convenience for smooth transport of Rough Stone and waste. Wherever necessary, crossing platforms provided in the haul roads at suitable point for safe crossing as tractors, tippers, trucks etc.,

Gravel formation will be removed and hydraulic excavators are used for loading the gravel into the tipper from pit head to needy buyers. This will be done only after obtaining permission and paying necessary seigniorage fees to the Government.

Average annual production is about 150709 cum of Rough Stone with 300 working days in a year. Considering the nature of the deposit and the anticipated daily production level, semi-mechanized mining is proposed.

A boundary barrier of 7.5m width will be maintained as per statute. Rough Stone locked up in this barrier will be excavated after obtaining permission from DGMS under Regulation 111 of Mines and Mineral Regulation, 1961. The sequence of working for the next Five years is indicated in Plate Nos. IV and the rate of production is given in Table No.11.



f) Conceptual Mine planning upto the end of lease period taking into consideration the present available reserves and resources describing the excavation, recovery of ROM, Disposal of waste, backfilling of voids, reclamation and rehabilitation showing on a plan with few relevant sections:

Conceptual Mining Plan :

Conceptual mining plan is prepared with an object of long-term systematic development of benches, lay outs, selection of permanent ultimate pit limit, depth of quarrying and ultimate pit, selection of sites for construction of infrastructure etc.,

While making the Conceptual Mining Plan and deciding the ultimate pit limits the following factors are considered.

i) Pit dimension :

a. Table No:16

	PIT
Length(m)	286.0
Width (m) Avg	136.0
Depth (m)	41.0m

01. Boundary Barriers

In this case a barrier of 7.5m is left along the lease boundary.

02. Depth of Mining :

The depth of mining is about 31.0m (1.0m Gravel+ 30.0m Rough Stone).

03. No. of benches :

The no. of benches will be seven including the Gravel bench.

04. Size and slope of benches :

In Gravel, the bench height will be 1.0m with 45° slope.

In Rough Stone, the bench 5.0m height and width 5.0m for next Five years.

05. Nature of Gravel:

The nature of the soil in this area is gravelly soil. The top most gravelly soil, this layer which is thickness of about 1.0m from general ground level.

06. The size of the lease hold :

The lease area has an extent of 4.00.0Ha.

07. Nature of ore body :

In the area Rough Stone is of massive Deposit and without much of geological disturbances.



i) The ultimate pit limits will be :

Ultimate pit limits have been marked in the Conceptual Mining Plan.

Table No. 17

	PIT
Length(m)	286.0
Width (m) Avg	136.0
Depth (m)	41.0m

- 01. Area already worked out – Plate No.III : 1.39.0 Ha.
- 02. The outline of the area to be worked out in the next Five years : 3.42.0 Ha.
Plate No. IV.
- 03. Year wise area to be planted for next Five years –Plate No.IV. : 0.56.0 Ha.
- 04. Extent of areas occupied by roads, site services, : 0.02.0 Ha.
etc., - Plate No.V.

Table No. 18

Sl. No.	Description	Present Area (Ha.)	Area in use during the quarrying period (Ha.)
01.	Area under Quarrying	1.39.0	3.42.0
02.	Infrastructure	Nil	0.01.0
03.	Roads	0.01.0	0.01.0
04.	Green Belt	0.01.0	0.56.0
05.	Unutilized Area	2.59.0	Nil
	TOTAL	4.00.0	4.00.0

Ultimate pit boundaries:

Ultimate pit limits have been marked in the Conceptual Plan in Plate No.VII.

ii) Waste dumps :

The mine waste (5%) will be backfilled in the mined out area.

Table No. 20

Proposed Backfilling Area:
149.0 m(L) x 61.0m(W) x 4.36m (H)= 39659 M ³

100 Neem trees/per year is to be afforested all sides of the boundary barrier.

The Gravel formation will be removed and hydraulic excavators are used for loading the gravel into the tipper from pit head to needy buyers. This will be done only after obtaining permission and paying necessary seigniorage fees to the Government.

Blasting Pattern:

The massive formation shall be broken into pieces of portable size by drilling and Proposed Control Blasting using jack hammers and shot hole Blasting. Power factor of explosives for breaking such hard rock shall be in the order of 6 to 7 tonnes per K.g of explosives.*



Proposed Control Blasting parameters are as follows.

Table No.19

Diameter of the hole	:	32-36 mm
Spacing	:	60 Cms
Depth	:	1 to 1.5m
Charge / Hole	:	D.Cord with water or 70 gms of gun powder or Gelatine.
Pattern of hole	:	Zig Zag
Inclination of hole	:	70° from the horizontal.
Quantity of rock broken	:	0.45 MT x 2.6 = 1.17 MT
Control Blasting efficiency @ 90%	:	1.17 x 90% = 1.05MT / hole
Charge per hole	:	140 gms of 25mm dia cartridge
Quantity of rock broken per day	:	502.36M ³ .

b) During dry season, Nitrate mixture as base charge and any conventional type of explosives as booster charge will be used:

In rainy season, it is preferable to use only conventional type of explosives like slurry based explosives. Since it is a small mine and the working of the mine is also seasonal, drilling will be done by contractors and supply of explosives will be done by authorized dealer. However, blasting will be done by a qualified mate or Blaster.

c) Secondary Blasting:

Secondary blasting is not needed, since the primary blasting itself will take care of the required fragmentation of waste rock and mineral body.

d) Storage of Explosives:

The explosive shall be supplied by the authorized contractor at the blasting site at the time of blasting. The explosive shall be directly used so no storage of explosive is proposed.

e) Safety Precautions:

1. During handling all care shall be taken that no inflammable elements should be there.
2. Only safety explosive container with explosive license shall be used for safe and secure transportation of explosive.
3. Efficient Siren will be blown prior to the blasting & after clearance of blasting.

f) Underground Mines :

Not applicable.

3.0 MINE DRAINAGE

The area is a slightly elevated terrain. Rain water finds its natural course. The water table is touched at a depth of 76m in summer and at 82m in NE monsoon. The water table fluctuation is verified by observing the water levels in the above seasons in the nearby wells.

During the mining of Fourteenth benches, it may be necessary to pump out water. A 5 HP pump can easily deal rain water and seepage water and keep the mine dry. The pumped out water will be left out far away from the Northeastern boundary.

a. Depth of Mining:

The working in Rough Stone will reach a depth of 31.0m (1.0m Gravel + 30.0m Rough Stone) in the next Five years.

b. Quantity and quality of water likely to be encountered:

In the next Five years, the water table will not pose any problem. However, to deal with storm water and seepage water, a diesel pump of 5 HP capacities is proposed.

In future, proper dewatering pumping arrangements to be made from pit bottom to nearby agricultural lands.

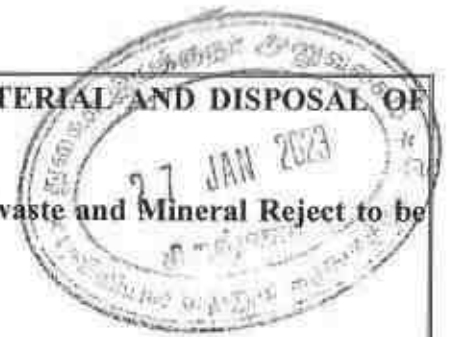
c. Describe regional and local drainage pattern. Also indicate annual rain fall, catchments area, and likely quantity of rain water to flow through the lease area, arrangement for arresting solid wash off etc.

Ground water is the main source in this area, apart from rain in the monsoon period. The water table is at a depth of 82m in summer and at 76m in rainy season. The ground water will be collected in the sump for the deposition of solid particles. Once the suspended particles are deposited it will be pumped out for domestic purpose, dust suppression system, gardening and Afforestation purpose. The excess water only will be pumped out to the ponds/closer water bodies-pond after the deposition of solid particles. There are no toxic elements found in the sump water.

To cope up with storm water and seepage water, an energy efficient electrical pump of 5 H.P capacity will be installed and the discharge will be left-out in the nallah/pond. Garland drains will be made all along the periphery of dumpsites to prevent the water carrying the wash-offs from the dumps. The water collected in the garland drains will flow towards a settling tank formed near by the dumpsite.

The water will be allowed to settle the wash offs from the dumps in the settling tank and pure and clear water will be utilized for Afforestation purposes and for haul roads arrest the dust generation.

4.0. STACKING OF MINERAL REJECT /SUB GRADE MATERIAL AND DISPOSAL OF WASTE



a) Indicate briefly the nature and quantity of Topsoil, Topsoil/waste and Mineral Reject to be disposed off.

Topsoil:

The Topsoil is gravelly soil. It occurs to a depth of 1.0m. The generation of Gravel for next Five years is about 20711 M³. Gravel formation will be removed and hydraulic excavators are used for loading the gravel into the tipper from pit head to needy buyers. This will be done only after obtaining permission and paying necessary seigniorage fees to the Government.

Side burden:

There is no sideburden in this lease area.

Sub-grade Mineral:

There is no Sub-grade Mineral produced in the next Five years.

Mineral reject:

The mine waste (5%) will be backfilled in the mined out area.

Proposed Backfilling Area:
149.0 m(L) x 61.0m(W) x 4.36m (H)= 39659 M ³

b) The proposed dumping ground within the lease area be proved for presence or absence of mineral and be outside the UPL unless simultaneous backfilling is proposed or purely temporary dumping for a short period is proposed in mineralized area with technical constraints & justification.

Construction of garland drain in around the pit and dump and settling tank will be provided to guard against the heavy rainwater.

Periodically sprinkling/spraying water on roads leading from working face to waste dump, so that areas are always kept wet to prevents emission of air borne dust. Retaining wall will be constructed around the pit.

c) Attach a note indicating the manner of disposal of waste, configuration and sequence of year wise buildup of dumps along with the proposals for protective measures.

The dumping of waste material, will be done steps to avoid sliding. One end of the waste dump to be matured for stabilization will be taken up for Afforestation.

Construction of garland drain in and around the pit. Settling tank will be provided to guard against the heavy rainwater.

Periodically sprinkling/spraying water on roads, so these areas are always kept wet to prevent emission of air borne dust.

Retaining wall and garland drain will be constructed around the pit. Afforestation programme will be carried out.



5.0 USE OF MINERAL AND MINERAL REJECT:

a) Describe briefly the requirement of end-use industry specifically in terms of

The entire mined out mineral is been utilized by the nearby Crusher unit in Krishnagiri.

b) Give brief requirement of intermediate industries involved in up gradation of Mineral before its end-use:

There is no intermediate industries involved for up gradation of Mineral.

c) Give detail requirements for other industries, captive consumption, export, Associated industrial use etc:

Not Applicable.

d). Physical specifications:

Rough stone texture is medium to coarse grained and is composed of recrystallized minerals, hence it is a metamorphic rock. The grains are subhedral, inequigranular, with a granoblastic texture. The grains are crystalline ie. Complete crystallization has occurred. Cleavage is absent. The color is dark olive green.

Supply of buyers :

Used in nearby Crusher units at Krishnagiri.

e) Give details of processes adopted to upgrade the ROM to suit the user Requirements:

Not applicable.

6.0 PROCESSING OF ROM AND MINERAL REJECT :

a) If processing / beneficiation of the ROM or Mineral Reject is planned to be conducted, briefly describe nature of processing / beneficiation. This may indicate size and grade of feed material and concentrate (finished marketable product), recovery etc:

The minerals produced from the mines need only specific sorting & grading for Size, Grade & Recovery factor. No mineral beneficiation processing is involved. Besides there is no other processing or beneficiation is required for upgrading.

Mineral Beneficiation of Mineral :

Not applicable, no beneficiation is being carried out at the mine. Since the entire mineral was supplied in raw form.

Beneficiation Test Done On Sub-Grade Mineral:

Not applicable, since no sub-grade mineral is anticipated.

b) Give a material balance chart with a flow sheet or schematic diagram of the Processing procedure indicating feed, product, recovery, and its grade at each stage of processing:

Not applicable.

c) Explain the disposal method for tailings or reject from the processing plant:

Not applicable.

d) Quantity and quality of tailings /reject proposed to be disposed, size and capacity of tailing pond, toxic effect of such tailings, if any, with process adopted to neutralize any such effect before their disposal and dealing of excess water from the tailings dam:

Not applicable.

e) Specify quantity and type of chemicals if any to be used in the processing plant:

Not applicable.

f) Specify quantity and type of chemicals to be stored on site / plant:

Not applicable.

g) Indicate quantity (cum per day) of water required for mining and processing and sources of supply of water, disposal of water and extent of recycling:

Water balance chart may be given.

Not applicable.

7.0. OTHERS:

a. Site Services :

The proposed site services are:

Drinking water, rest shed, store room, public convenience etc., mines office and blaster shelter etc., please refer Plate Nos.IV, V, VII and VIII.

Employment Potential:

i)Skilled Labour:

Foreman/ Part time Mining Engineer	:	1
Excavator operator	:	2
Co- operator	:	2
Jack hammer operator	:	6
Blaster/mate	:	1

ii)Semi-skilled: :

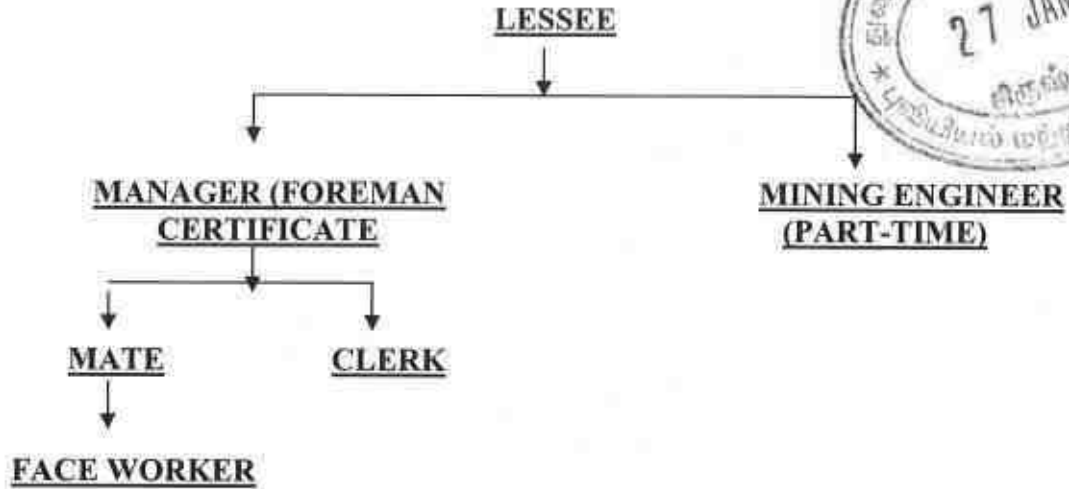
watchman :

iii)Unskilled helper Muzdoor :

Total : 21 Nos.



The proposed organization chart :



The drilling will be done by contractors. The mine will work in a single shift from 8.00 AM to 4.00 PM with one hour lunch interval between 12.00 Noon and 1.00 PM.

8.0 PROGRESSIVE MINE CLOSURE PLAN

INTRODUCTION

Name of the Mine : Kothapetta Rough Stone Quarry
Lessee : Tmt. K. M. Vijaya,
Address : Tmt. K.M. Vijaya,
W/o. Mathiazhagan,
D.No.58B, Gandhi Nagar,
Krishnagiri Town,
Krishnagiri District - 635 001.
Tamil Nadu.

Location :

Extent : 4.00.0 Ha.
S.F.No : 78/1B (Part)
Village : Kothapetta
Taluk : Krishnagiri
District : Krishnagiri

Type of Lease Area : Patta Land- Non-Forest area
Present land use pattern : Quarrying of Rough Stone
Method of Mining : Semi-mechanized
Mineral processing operation : Nil

8.1 Environment Base line information: Attach a note on the status of baseline

Information with regard to the following:

Existing land use pattern:

Table No:20

Sl. No.	Description	Present Area (Ha.)	Area in use during the quarrying period (Ha.)
01.	Area under Quarrying	1.39.0	3.42.0
02.	Infrastructure	Nil	0.01.0
03.	Roads	0.01.0	0.01.0
04.	Green Belt	0.01.0	0.56.0
06.	Unutilized Area	2.59.0	Nil
	TOTAL	4.00.0	4.00.0

Water Regime

Ground water is touched at a depth of 82m in summer and at 76m in NE monsoon season. The average rainfall is 800-900mm. There is no lake, reservoir or river near the area. Villagers use open well water for drinking and other domestic purposes for ages without any adverse health effects. However drinking water will be supplied from the public water supply system from nearby hamlets.

Air-Quality:

The air quality will be affected during the quarrying period due to blasting and jack hammer drilling, which will be within permissible limits. Since this is an open area, the impact on air quality will be to the minimum. The mine roads will be sprinkled with water before starting the transportation of rough stone and wastes to minimize air pollution.

Noise Level:

Quarrying of Rough Stone had been carried out by drilling and control blasting by using low power explosives, and hence, noise will be very minimum.

Flora and Fauna

Since the lease area is a stony waste, it does not contain much vegetation. There is no report of existence of wild animals in this region.

Climate Conditions

The area receives rainfall of about 800mm to 900mm per annum and the rainy season is mainly from October-January during North East Monsoon. The summer is hot with maximum temperature of 38⁰C and winter encounters a minimum temperature of 18⁰C.



Human Settlement

The hamlets near the area are: Table No:21

Name of Hamlet	Population	Direction from the area	Distance
Kallukurikki	240	N	1.5 kms.
Kathinayanapalli	250	E	3.5 kms.
Bayanapalli	280	W	2.0 kms.
Krishnagiri	680	S	2.0 kms.

Public building, Places of worship and Monuments

There is no public building, places of worship or archaeological or national monuments near the area. There is no wild life or bird sanctuary or no reserve or any protected social forest closer to the area.

8.2 Impact Assessment: Attach an Environmental Impact Assessment Statement Describing the impact of mining and beneficiation on environment on the following:

a) Environmental Impact Assessment Statement:

The factors that should be covered in this Para are: -

01. Land
02. Air Quality
03. Water Quality
04. Noise Levels
05. Vibration Levels
06. Water Regime
07. Socio-Economics
08. Historical Monuments etc.

Land:

It is a working mine. There is a proposal for backfilling. Before closure of the mine, a parapet wall will be constructed to prevent inadvertent entry of cattle and human beings. The dumps will be vegetated to prevent sliding. After closure of the mine, the pit will be allowed to collect seepage and rain water.

This will help to charge the nearby agricultural wells. Fish forming will also be attempted.

Afforestation will be attempted in the boundary barrier.

Air-Quality:

The air quality will be affected during the quarrying period due to blasting and jack hammer drilling, which will be within permissible limits. Since this is an open area, the impact on air quality will be to the minimum. The mine roads will be sprinkled with water before starting the transportation of rough stone and wastes to minimize air pollution.

Water Quality:

Mining operation will not produce any toxic effluent in the form of solid, liquid or gas. The existing water quality will not be affected by mining operation. The Surface water flow through the seasonal water course as usual.

Noise Level:

Quarrying of Rough Stone had been carried out by drilling and control blasting by using low power explosives, and hence, noise will be very minimum.

Vibration levels:

The ground vibration will be caused due to movement of earth moving equipment and blasting. But the impact on the environment will be negligible, since the quantity of explosives used will be very small and the movement of equipment will be intermittent.

Water Regime:

Mining operation will not produce any toxic effluent in the form of solid, liquid or gas and will not have any impact on quality of water and also on ground water.

Socio-Economics:

The local population is mostly agriculture based. Agricultural is done only on seasonal basis. Mining in this area is an avenue for employment. Mining certainly has created an impact in the Socio-economic standards of the local people. It has improved the life style of the local people and has improve the standard of living.

Historical Monuments:

There is no historical or Archaeological monument near the area. The mining operation does not have any impact on these aspects.

8.3 PROGRESSIVE RECLAMATION PLAN:

Since, it is an existing mine, the only proposal now is to plant 100 Neem trees every year in the boundary barrier. A retaining wall will be constructed around the pit. Please refer Plate Nos.V. The Afforestation programme for the next Five years are described as follows :

Table No. 22

Year	Name of the species	No. Of species	Interval	Area in Ha.	Survival rate
2023-2024	Neem	100	5m	0.11.0	60%
2024-2025	Neem	100	5m	0.11.0	60%
2025-2026	Neem	100	5m	0.11.0	60%
2026-2027	Neem	100	5m	0.11.0	60%
2027-2028	Neem	100	5m	0.12.0	60%
TOTAL		500		0.56.0	

After complete extraction of mineral, the pit will be allowed to collect rain and seepage water to serve as a reservoir to charge the nearby wells. Fish culture will also be attempted. A bund will be constructed around the pits.

8.3.1. MINED OUT LAND:

It is an existing mining lease. There is a proposal for back filling at the conceptual stage.

- | | |
|-----------------------------------------------------|--------------|
| 01. The area covered by pits | : 3.42.0 Ha. |
| 02. The area covered by waste dumps & Afforestation | : 0.56.0 Ha. |
| 03. The area covered by roads, infrastructure | : 0.02.0 Ha. |
| 04. Unutilized area | : Nil |



8.3.2. Topsoil management:

The Topsoil is Gravel. It will be removed and hydraulic excavators are used for loading the gravel into the tipper from pit head to needy buyers. This will be done only after obtaining permission and paying necessary seigniorage fees to the Government.

8.3.3. Tailing Dam Management

Does not arise.

8.3.4 Acid mine drainage, if any and its mitigative measures.

Not applicable.

8.3.5 Safety And Security

All the quarry workers will be provided with safety equipments like helmets, Mine Goggles, Ear plugs, Ear muffs, Dust mask, reflector jackets and Safety Shoes as personal protective device as per the specification approved by Director of mines safety. Periodically medical checkup will be conducted for all workers for any mine health related problems. Proper training and induction will be given by qualified and experienced safety officer to all employed about the safe and systematic Rough stone quarrying operations. The drillers and workers will be sent for vocational training periodically to carry out the quarrying operations scientifically to safe guard the men machinery and mineral and to create awareness of conventional opencast quarrying operations.

Parapet wall or bund have been constructed on all sides of the openings. Proper pumping arrangements during rainy season. Trees planted all along the mining lease boundary.

8.4 Disaster Management And Risk Assessment

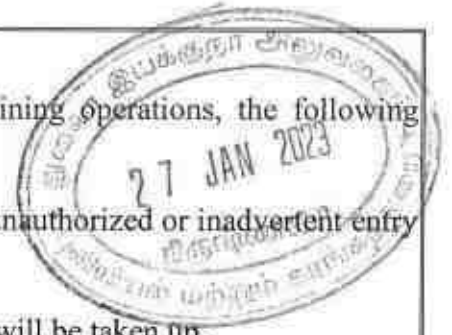
The nearby hamlet is Krishnagiri which is at a distance of 2.0 kms where facilities like District government Centre etc., are available. Mode of transport available is Jeep. All the employee will be shifted to the nearest hamlet Krishnagiri. Mobile phone will be provided to the Mines Manager. The Manager/Supervisor will be provided with a mobile phone. The Mining area is very small. There is no chance for risk for any disaster. However, the details of contact person are given :

Contact person	:	Tmt.K.M. Vijaya, W/o. Mathiazhagan,
Postal Address	:	D.No.58B, Gandhi Nagar, Krishnagiri Town, Krishnagiri District - 635 001.

8.5 Care and maintenance during temporary discontinuance:

In case, of any temporary closure or discontinuance of mining operations, the following steps are proposed.

- Watchman will be posted round the clock to prevent any unauthorized or inadvertent entry of general public.
- Works on stabilization of dumps to provide vegetal cover will be taken up.
- Construction of garland drains in the pit and retaining walls around the dumps will be attempted.



8.6 .Project Cost:

Table No.23


<u>A. Fixed Asset Cost:</u>		
1. Land Cost	:	Rs. 30,00,000/-
2. Labour Shed	:	Rs. 1,30,000/-
3. Sanitary Facility	:	Rs. 80,000/-
4. Fencing cost	:	Rs. 70,000/-
Total=	:	Rs. 32,90,000/-
<u>B. Operational Cost:</u>		
<u>Machinery cost</u>	:	Rs.40,00,000/-
<u>C. EMP Cost:</u>		
Drinking water facility	:	Rs. 1,20,000/-
Safety kits	:	Rs. 80,000/-
Water sprinkling	:	Rs. 70,000/-
Afforestation	:	Rs. 40,000/-
Water quality test	:	Rs. 40,000/-
Air quality test	:	Rs. 40,000/-
Noise/vibration test	:	Rs. 40,000/-
Total=	:	Rs. 4,30,000/-
Total Project Cost(A+B+C)	:	Rs. 77,20,000/-

9.0 Any Other Information:

The Scheme of Mining proposed has fully covered the aspects of Tamil Nadu Minor Mineral Concession Rules with a plan to extend the proposed working of the mine to the maximum possible depth of the deposit. To avoid wastage, the deposit has to be carefully and economically mined. Work persons have to be educated about the value of mineral. The Lessee endeavours every attempt to win mineral economically without wastage and to improve the environment and ecology.


S.DHANASEKAR, M.Sc. (Geo)
Qualified Person

This Mining Plan is approved based on guidelines / instruction issued and in corporation of the particulars specified in the letter Roc. No. 1120/2020/Mined Dated 27.1.2023 of the Deputy Director of Geology and Mining, Krishnagiri and subject to further fulfillment of the conditions laid down under Tamil Nadu Minor Mineral Concession Rules, 1959 and Minor Mineral Conservation and Development Rule 2010.


27.01.23
DEPUTY DIRECTOR
Geology and Mining
Collectorate, Krishnagiri.


27/1/23

This Mining Plan is approved subject to the conditions / Stipulation Indicated in the Mining Plan Approval
Letter Roc. No. 1120/2020 Dated 27.1.2023



PROCEEDINGS OF THE DISTRICT COLLECTOR, KRISHNAGIRI

Present: Thiru C. Kathiravan, I.A.S.,

Roc.No.419/2017/Mines

Dated 30.05.2018

Sub: Mines and Minerals - Krishnagiri District and Taluk
- Kothapetta Village - S.F.No. 78/1B(part) - Over
an extent of 4.00.0 Hects of patta lands - Quarry
Lease for Rough Stone Application preferred by Tmt.
K.M. Vijaya W/o D. Mathiazhagan No. 58B Gandhi
Nagar, Krishnagiri Town and Taluk - precise area
given to the applicant - Environment Clearance
issued - orders issued - reg.

- Ref: 1 Quarry lease application of Tmt. K.M. Vijaya W/o
D. Mathiazhagan No. 58B Gandhi Nagar,
Krishnagiri Town and Taluk dated 05.08.2017.
- 2 The District Collector Krishnagiri letter Roc. No.
419/2017Mines-1, dated 10.08.2017 addressed
to the Revenue Divisional Officer, Krishnagiri &
District Forest Officer, Hosur.
- 3 The Revenue Divisional Officer, Krishnagiri letter
K.Dis 3485/2017/C, dated 03.10.2017.
- 4 The Deputy Director of Geology and Mining,
Krishnagiri technical report dated 20.11.2017.
- 5 The Deputy Director of Geology and Mining,
Krishnagiri letter Roc. No. 419/2014/Mines
dated 29.12.2017.
- 6 The District Level Environmental Impact
Assessment Authority Krishnagiri Lr No. 34
DEIAA-KGI/EC No. 26/2018 Dated 27.02.2018.
- 7 The Deputy Director of Town and County Planning
Dharmapuri letter No.1654/2017Thama dated
08.01.2018.

-oOo-

ORDER:

Tmt. K.M. Vijaya W/o D. Mathiazhagan No. 58B Gandhi Nagar, Krishnagiri
Town and Taluk have applied for the grant of quarry lease to quarry Rough stone for
a period of five years over an extent of 4.00.0 hect. in patta land in S.F.Nos. 78/1B
(part) of Kothapetta Village of Krishnagiri Taluk and District vide in their application
1st cited.

2. The Revenue Divisional Officer, Krishnagiri had furnished land availability and inspection report vide in the reference 3rd cited. From her report, the following facts are revealed.

a) The applied area in S.F.Nos. 78/1B (part) over an extent of 4.00.0 Hects. Stands registered in the name of Tmt. K.M.Vijaya W/o D. Madhiaghagan vide patta NO. 1521 in kothapetta Village records.

b) There is no residential area, Natham, School Buildings, Place of worship are situated within 300 mts. Radial of proposed from the applied area.

c) There is No Odai, river EB lines, Telephone lines, situated within 50 mts radial distance.

d) There is no objection for the A1 Notice published in Kothapetta Village on 11.08.2017.

e) There is no litigation in the area, and it is not acquired by the Government and it is not registered in the prohibitory area book.

f) Approach road to the area is available from Krishnagiri- Maharajakadai Road through the remaining portion of the patta land S.F No. 78/1B of the applicant.

g) Finally he had recommended for the issue of quarry lease for Rough Stone to the applicant for a period of five years over an extent of 4.00.0 hecets in patta land S.F No. 78/1B (part) of Kothapetta Village, Krishnagiri Taluk and District subject to the condition that no quarrying should be carried out in the adjacent Government land and no hinderance should be given to the public.

3) Deputy Director (G&M), Krishnagiri had inspected the area on 17.11.2017 and furnished his technical report vide in the reference 4th cited. From his report the following facts are revealed.

a) The applied area stands registered in the name of the applicant Tmt. K.M. Vijaya W/o D. Madhiaghagan vide patta NO. 1521 in Kothapetta village records.

b) The area is in the form of small mount having a height of 15 mts. Sloping on East and West side with bouldry out crops topsoil cover is very meager and observed only interstitial filling of the boulders. The Country rock of the area is granitic Gneiss having a general trend of NE-SW almost vertical dipping. The rock type available in the area is suitable for making rough stone, cut stone and jellys.

c) The area in virgin, Age old pit with average dimension of 40x 22.5 x 3.7 Mts is observed on the South-East corner of the area with water logged condition

d) Approach road to the area is available.

e) No habitation is situated within 300 meters radial distance from the applied area.

f) NO permanent structures observe with in 50 mts radial distance.



g) There is no fauna and flora of botanical importance noticed in the applied area. The village in which the lease applied area is situated is not classified as a Hill Village.

h) Four boundaries of the applied area.

S.F.No	North	East	South	West
78/1B (part)	78/1B (part), 78/3 (part) (patta)	78/1B (part) (patta)	78/1B (part) patta	78/1B (part) Patta

e) The details of quarries situated within 500 mts radial distance from the applied area.

Sl. No.	Name of the lessee	Village	S.F.No. Extent in Hect	Extent in Hec	Collector's ProceedingNo. & date	Lease period
1	M/s. Devarajaa M.Sand	Kothapetta	78/1A (p) & 78/1B	4.00.0	--	Under Process
2	Tmt. K.M. Vijaya	Kothapetta	78/1B (part)	4.00.0	--	Instant proposal
3	Thiru Ganesan	Kothapetta	56/1 (part-D)	2.54.0	Roc. 611/2009/Mines dated 14.5.2015	14.5.2015 to 13.05.2020
4	S.Sumitha Sankar	Kothapetta	56/1 (part-5)	1.20.0	Roc. No. 49/2015/Mines dated 18.8.2016	01.09.2016 to 31.08.2021
5	Qummarunnisa	Kothapetta	87/1B1 (part) and 87/1B2 (part)	4.75.0	Ro. 08/2013/Mines dated 05.2.2016	2.3.2016 to 01.03.2021
6	A. Madesh	Kothapetta	56/1 (part-C)	3.06.0	Roc. 126/2010/Mines dt. 27.10.2009	3.05.2010 to 02.05.2015
	Total			19.55.0		

j) Finally, he had recommended that, a quarry lease for rough stone may be granted to Tmt. K.M. Vijaya over an extent of 4.00.0 Hectars of patta lands in S.F No. 78/1B (part) of Kothapetta Village Krishnagiri Taluk and District for a period of 5 years from the date of execution of lease deed under the provisions of Rule 19 (1) of Tamil Nadu Minor Mineral Concession Rules 1959, Subject to the following conditions.

A safety zone of 7.5 mts should be left out for the adjoining patta lands.

4. As per the amended provisions of Rule 41 & 42 of Tamil Nadu Minor Mineral Concession Rules 1959, the approved mining plan and Environmental Clearance are made mandatory for the grant of quarry lease for minor Minerals also.

5) Based on the recommendation of the Revenue Divisional Officer, Krishnagiri and Deputy Director (Geology and Mining), Krishnagiri precise area had been given over an extent of 4.00.0 Hects in S.F.No. 78/1B (part) of Kothapetta Village, Krishnagiri Taluk and District for the proposed grant of quarry lease for rough stone for a period of five years from the date execution of lease deed subject

rough stone quarry and the applicant had been directed to submit the Approved Mining Plan and Environmental Clearance from the District Level Environmental Impact Assessment Authority, Krishnagiri.

9) The applicant have submitted the approved mining plan approved by the Deputy Director of Geology and Mining vide in the reference 5th cited and the Environment clearance given by the District Level Environment Impact Assessment Authority Krishnagiri in the reference 6th cited.

10) In the Deputy Director of Town & Country Planning Dharmapuri letter RG No. 1654/2017/Tha.ma dated 08.01.2018 it is informed that the lease granted area are classified as "Unclassified Area" and if there is no residential area and other constructions are situated within 300 mts. From the said area, there is no objection for the carrying out of quarrying a activity in the area. In the G.O Ms. No. 129 Housing and Urban Development (UD4 (3)) Department dated 08.07.2016 construction of residential, commercial, industrial or institutional or any structure for occupation shall not be allowed within 300 mts from any quarry area is not allowed.

9) Further, the applicant had submitted the paper cuttings in which the grant of Environment Clearance is published in the daily news paper as per the condition imposed by the State Level Environment Impact Assessment Authority.

10) In view of the above a quarry lease for rough stone is here by granted to Tmt. K.M. Vijaya No. 58B Gandhi Nagar, Krishnagiri over an extent of 4.00.0 Hects in patta land S.F.Nos. 78/1B (part) of Kothapetta Village, Krishnagiri Taluk and District under the provisions of Rule 19 (1) of Tamil Nadu Minor Mineral Concession Rules, 1959 for a period of five years from the date of execution of lease deed subject to the following special conditions and conditions.

- a) A safety zone of 7:5 mts should be left out for the adjacent patta lands.
- b) At any cost no quarrying should be carried out in the adjacent Government land and no hinderance should be given to the public.
- c) Mining plan shall be prepared by in corporating all the details as proposed in the Minor Mineral Conservation and Development Rules 2010.



- d) Mining Plan shall be prepared by the in incorporating all the details as proposed in the letter No. SEIAA-TN/Minor Minerals/2012 dated 17.04.2013 of the State Level Environment Impact Assessment Authority, Tamil Nadu.
- e) Quarrying activity should be carried out only from 7.00 A.M to 5.00 P.M.
- f) The grantee should sent the notice for opening of the quarry to the Director General of Mines safety, Bangalore.
- g) Quarrying operation should be carried out only after appointing Mines Manager/Mines Mate and Foremen.
- h) At any cost the blasting activity should be carried out under the Supervision of Mines Mate.
- i) If any accident occur in the quarry area the lessees should give immediate intimation to the Director of Mines safety Bangalore and District Collector, Krishnagiri and lessee is solely held responsible for any violation.
- j) The grantee should remit Rs.10,000/- towards security deposit and Rs. 3,000/- towards area assessment in the relevant head of account and submit the original challans.
- k) The grantee should submit the non judicial stamp papers for the value of Rs. 6,37,802/- and to execute the lease deed with the District Collector in the prescribed time limit.
- l) The grantee should remit a sum of Rs. 5,00,000 (Rupees five laksh) in the form of fixed deposit Jointly in the name of the District Collector and the grantee and submit the receipt of the fixed deposit caution deposit towards the restoration of the quarried pit.

II) Conditions imposed for rough stone quarrying:

1. குத்தகை காலம், குத்தகை ஒப்பந்தப்பத்திரம் நிறைவேற்றும் நாளிலிருந்து ஐந்து ஆண்டுகளாகும்.
2. குவாரி குத்தகை வழங்கப்பட்ட இடத்தில் குவாரி செய்யும் வேலிக்கல் / குண்டுக்கல் / கட்டுக்கல் / சக்கை மற்றும் ஜல்லி ஆகியவற்றை மேற்படி இடத்திலிருந்து வெளியில் எடுத்துச் செல்வதற்கு முன்பு அவை ஒவ்வொன்றிற்கும் அவற்றிற்குரிய வீதத்தில் சீனியரேஜ் தீர்வை செலுத்தி இவ்வலுவலகத்தில் பர்மிட் மற்றும் நடைச்சீட்டு பெற்ற பின்புதான் மேற்படி கனிமங்களை குவாரியிலிருந்து வெளியில் எடுத்துச் செல்ல வேண்டும். 1959 ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், இணைப்பு II-ல் அவ்வப்போது அரசால் நிர்ணயிக்கப்படும் வீதத்தில் பரப்பு தீர்வை செலுத்த வேண்டும். மேற்கண்ட தொகையைத் தவிர அரசால் அவ்வப்போது நிர்ணயிக்கப்படும் இதர தொகைகளையும் குத்தகைதாரர் செலுத்த வேண்டும்.
3. குத்தகை இடத்திற்கு அருகிலுள்ள குடியிருப்புகள், கட்டடங்கள், நீர்நிலைகள், குளங்களின் கரைகள், மரங்கள், சாலைகள், வண்டிப்பாதைகள், நடைபாதைகள் மற்றும் இதர பொதுச் சொத்துக்களுக்கு பாதுகாப்பில்லாமல் குவாரி செய்ய வேண்டும்.
4. குத்தகை வழங்கப்பட்ட இடத்திற்கு அருகாமையில் உள்ள பட்டாதாரர்கள் மற்றும் பொது மக்களுக்கு பாதுகாப்பில்லாமல் குவாரி செய்ய வேண்டும்.

- பதாலைபேசி கம்பிகளுக்கு 50 மீட்டரும், குடியிருப்பு பகுதியிலிருந்து 300 மீட்டரும்; நடைபாதைகள், கிராம சாலைகளுக்கு 10 மீட்டரும் பாதுகாப்பு இடைவெளி விட்டு குவாரி செய்ய வேண்டும்.
6. மாவட்ட ஆட்சித்தலைவர் (அல்லது) அரசால் அதிகாரம் வழங்கப்பட்ட அலுவலரை குத்தகை வழங்கப்பட்ட இடத்தைப் பார்வையிடவும், குவாரி பதிவேடுகள், ஆவணங்கள் மற்றும் கணக்கை சரிபார்க்கவும் அனுமதிக்க வேண்டும். இது சம்பந்தமாக அவர்கள் கோரும் அனைத்து விவரங்களையும் வழங்க வேண்டும்.
 7. சுற்றுப்புற சூழ்நிலை பாதுகாப்பு, கனிம பாதுகாப்பு, தொழிலாளர் பாதுகாப்பு முதலியவற்றைக் கருத்தில் கொண்டு விஞ்ஞான அடிப்படையில் திறமையுடன் முறையாகக் குவாரி செய்ய வேண்டும்.
 8. மாவட்ட ஆட்சித்தலைவர் மற்றும் ஆணையர், புவிமியல் மற்றும் சுரங்கத்துறை, ஆகியோரால் அதிகாரம் வழங்கப்பட்ட அலுவலரை மேலே பத்தி (5)-ல் குறிப்பிட்டுள்ள நிபந்தனைகள் தொடர்பாகவும், மேற்கண்ட அலுவலர்களின் ஆணையை நிறைவேற்றவும் குத்தகை வழங்கப்பட்ட இடத்தைப் பார்வையிட அனுமதிக்க வேண்டும்.
 9. குத்தகைதாரரின் செலவில் குத்தகை ஒப்பந்தப்பத்திரம் நிறைவேற்றி அதனை பதிவு செய்வதற்கு முன்பு குத்தகை இடத்தில் குவாரி மற்றும் இது சம்பந்தப்பட்ட வேலைகளைத் தொடங்கக்கூடாது.
 10. குத்தகை வழங்கப்பட்டுள்ள இடத்திற்குள் எல்லையிலிருந்து 7.5 மீட்டர் தூரத்திற்குள் குவாரி செய்யக் கூடாது.
 11. பொது சாலைகளிலிருந்து குத்தகை வழங்கப்பட்ட இடத்திற்குச் செல்ல பாதை வசதி குத்தகைதாரர் சொந்த பொறுப்பில் செய்து கொள்ள வேண்டும்.
 12. குத்தகை ஒப்பந்தப்பத்திரத்துடன் இணைந்துள்ள வரைபடத்தில் காட்டியுள்ள குத்தகை இடத்தைச் சுற்றிலும் எல்லைக்கற்கள் நட்டு அவற்றைச் சரியானபடி பராமரிக்க வேண்டும்.
 13. 1959 ஆம் வருடத்திய தமிழ்நாடு சிறுகனிமச் சலுகை விதிகள் இணைப்பு XII மற்றும் XII-ல் உள்ள படிவங்களில் முறையே இசைவாணைச்சீட்டு மற்றும் நடைச்சீட்டிணைத் தயார் செய்து அவற்றில் மாவட்ட ஆட்சித்தலைவரால் அதிகாரம் வழங்கப்பட்ட அலுவலரின் கையொப்ப முத்திரை மற்றும் அலுவலக முத்திரைகள் பெற்று குவாரியிலிருந்து குண்டுக்கல், கட்டுக்கல், சக்கை மற்றும் ஜல்லி ஆகியவற்றை வெளியில் எடுத்துச் செல்லும் ஒவ்வொரு வாகனத்திற்கும் ஒவ்வொரு நடைக்கும் வழங்கப்படவேண்டும். குண்டுக்கல், கட்டுக்கல், சக்கைகல், ஜல்லி ஆகியவற்றை ஏற்றிச் செல்லும் ஒவ்வொரு வாகனமும் அதனைச் சோதனைச் செய்வதற்கு அதிகாரம் பெற்ற அலுவலர் சோதனைச் செய்யும்போது நடைச்சீட்டிணைக் காண்பிக்க வேண்டும். இசைவாணைச்சீட்டு மற்றும் நடைச்சீட்டின் நகல்களை குவாரியில் வைத்திருக்க வேண்டும். முறையான இசைவாணைச்சீட்டு மற்றும் நடைச்சீட்டுகள் இல்லாமல் கனிமங்களை ஏற்றிச் செல்லும் வாகனங்கள் 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிமச் சலுகை விதிகள் மற்றும் சுரங்கங்கள் மற்றும் கனிமங்கள் (ஒழுங்குமுறை மற்றும் அபிவிருத்தி) சட்டம், 1957-ன்படி கைப்பற்றப்பட்டு, குத்தகைதாரர் மீது நடவடிக்கை எடுக்கப்படுவதுடன் குவாரிக் குத்தகையையும் ரத்து செய்ய நடவடிக்கை எடுக்கப்படும்.
 14. குத்தகை வழங்கப்பட்ட இடத்தை குண்டுக்கல், கட்டுக்கல், சக்கை மற்றும் ஜல்லி குவாரி செய்ய ட்டும் பயன்படுத்த வேண்டும். குத்தகை உரிம ஆணை அல்லது குத்தகை ஒப்பந்தப்பத்திரத்தில் தவறுதலாக கனிம விவரம் குறிக்கப்பட்டு இருந்தால் அதனை எந்த நேரத்திலும் திருத்துவதற்கு மாவட்ட ஆட்சியருக்கு அதிகாரம் உண்டு. குத்தகைதாரர் அதன்படிப்படையில் ரந்த உரிமையும் கோரமுடியாது.
 15. மெருகேற்றுவதற்கும், அயல் நாட்டிற்கு ஏற்றுமதி செய்வதற்கும் பயன்படும் பெரிய கந்துண்டங்கள் வடிவத்தில் கற்குவாரி செய்யக் கூடாது.
 16. குத்தகை ஒப்பந்தப்பத்திரத்தில் குறிக்கப்படாத வேறு ஏதாவதொரு கனிமம் கிடைத்தால், அதனை சம்பந்தப்பட்ட அலுவலரின் அனுமதியைப் பெறாமலும், அதற்குரிய சீனியரேஜ் தொகையைச் செலுத்தாமலும் எடுக்கக்கூடாது. புதிய கனிமம் கிடைத்த விவரத்தை 30 தினங்களுக்குள் தெரிவிக்காமல் எடுத்துச் சென்றால் இக்குற்றத்திற்கு அந்த கனிமத்திற்குரிய சாதாரண சீனியரேஜ் கட்டணத்தைப்போல் 15 மடங்குவரை மாவட்ட ஆட்சித்தலைவரால் அபராதம் விதித்து வசூலிக்கப்படும்.
 17. குத்தகை காலம் முடிந்தபிறகு, குத்தகை வழங்கப்பட்ட இடத்திலிருந்து குண்டுக்கல், கட்டுக்கல், சக்கை மற்றும் ஜல்லியை குவாரி செய்து வெளியில் எடுத்துச் செல்ல குத்தகைதாரருக்கு உரிமையில்லை.
 18. குத்தகை காலம் முடிவடைந்த பிறகு குத்தகை இடத்தில் எஞ்சின, மெஷின் போன்ற எந்தவிதமான தளவாட பொருட்களையும் வைத்திருக்கக்கூடாது. அவற்றை குத்தகை காலத்தில் கடைசி நாளன்று குத்தகைதாரர் எடுத்துச் சென்றுவிட வேண்டும்.
 19. குத்தகையை வேறு எவருக்கும் உள் குத்தகைக்கு விடக்கூடாது.



20. குவாரி செய்வதில் இழப்பு ஏற்படின் நஷ்டஈடு கேட்கக்கூடாது.
21. குவாரியில் வேலை செய்யும் தொழிலாளர்கள் மற்றும் இடா நடமாடகருக்கு கமிட்டி ஏதாவது ஏற்படின் அதற்கு முழுப் பொறுப்பினையும் குத்தகைதாரரைச்சேரும். இதற்கு அரசு பொறுப்பில்ல.
22. அரசுக்கு செலுத்த வேண்டிய தொகையை உரிய காலத்திற்குள் செலுத்தவில்லை என்றால் அத்தொகை 24% அல்லது அரசால் அவ்வப்போது நிர்ணயிக்கப்படும் வீதத்தில் வட்டியுடன் குத்தகைதாரரிடமிருந்து வசூலிக்கப்படும்.
23. அரசுக்கு செலுத்த வேண்டிய பாக்கித் தொகை தமிழ்நாடு வருவாய் வசூல் சட்டம் 1864-ன் கீழ் வசூலிக்கப்படும்.
24. குத்தகை நிபந்தனைகள், 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், அரசு, ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, மாவட்ட ஆட்சித்தலைவர் ஆகியோரது ஆணைகள் மீறப்படின் மீறுக்கு அபராதம் விதிப்பதோடு அல்லாமல் குத்தகைதாரருக்கு நேர்முக விசாரணைக்கு வாய்ப்பளித்த பின்பு குத்தகை உரியம் ரத்து செய்ய நடவடிக்கை எடுக்கப்படும்.
25. அரசின் அவ்வப்போதைய ஆணைகளுக்கேற்ப நிபந்தனைகளை மாற்றி அமைக்கவோ, நீக்கவோ, கூடுதலாக சேர்க்கவோ, மாவட்ட ஆட்சித்தலைவருக்கு முழு அதிகாரம் உண்டு.
26. மேற்கூறிய நிபந்தனைகளுடன் 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், சுரங்கங்கள் மற்றும் கனிமங்கள் (ஒழுங்குமுறை மற்றும் அபிவிருத்தி) சட்டம் 1957, மாவட்ட ஆட்சித்தலைவர் ஆகியோரால் அவ்வப்போது பிறப்பிக்கப்படும் ஆணைகள் குத்தகைதாரரைக் கட்டுப்படுத்தும்.
27. குவாரிகள்/சுரங்கங்களுக்கு பொருத்தக்கூடிய தொழிலாளர் சட்டங்களுக்கு கட்டுப்பட்டு குத்தகைதாரர் குவாரி செய்யவேண்டும். தவறினால் சம்மந்தப்பட்ட அரசின் சட்டப்பூர்வமான நடவடிக்கைகளுக்கு குத்தகைதாரர் உள்ளாக வேண்டி இருக்கும்.
28. இந்திய வெடிமருந்து சட்டம் 1884 (Central Act IV of 1884)-ன்படி உரிய வெடிமருந்து உரியம் பெற்று குத்தகைதாரர் பாறைகளை வெடிவைத்து உடைக்க வேண்டும். தவறும் பட்சத்தில் குத்தகைதாரர் கடும்தண்டனைக்கு உள்ளாக வேண்டியிருக்கும்.
29. குத்தகைதாரர் குவாரியில் குழந்தை தொழிலாளர்களை பணியமர்த்தக்கூடாது.

III) a) The conditions imposed by the Tamil Nadu Pollution Control Board in the consent to establishment in Air and Water Pollution Act should be strictly adhered and the consent should be renewed periodically.

b) The Environment Clearance issued by the DEIAA, Tamil Nadu should be renewal within the prescribed time limit.

IV) Conditions imposed.

1. (i) The Environment Clearance is granted to Mining of Rough Stone for the production quantity 10,80,884 cbm of rough stone for the period of five years from the date of execution of the mining lease period.

(ii) The approved quantity of rough stone to be quarried = 10,80,884 cbm

(iii) Depth of mining permitted = 71 mts. (25 Mts. Above ground level and 46 mts below ground level) from a period of 5 years.

2.) Conditions to complied before the commencing of mining operation

1. The applicant has to obtain land use classification as industrial use before issue / renewal of mining lease.

2. NOC from the Standing committee of the NBWL shall be obtained, if protected areas are located within 10 km from the proposed project site.

3. The project proponent shall comply the conditions laid down in section V Rule 36 of Tamil Nadu Minor Mineral Concession Rules, 1959.

to the concerned Panchayat, Town Panchayat / Panchayat union/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the proponent and also kept at the site, for the general public to see.

5. Quarry lease area should be demarcated on the ground with wire fencing to show the boundary of the lease area on all sides with red flags on every pillar shall be erected before commencement of quarrying.

6. The proponent shall ensure that First Aid Box is available at site.

7. The excavation activity shall not alter the natural drainage pattern of the area.

8. The excavated pit shall be restored by the project proponent for useful purposes. In this regard, the proponent shall deposit a sum of Rs. 5,00,000/- (Rupees Five Lakhs only) in the name of District Collector, Krishnagiri in the form of fixed deposit. The said fixed deposit will be refunded after restoration of pit after end of the lease period.

9. The proponent shall quarry and remove only in the permitted areas as per the approved Mining Plan details.

10. The quarrying operation shall be restricted between 7AM and 5 PM.

11. The proponent shall take necessary measures to ensure that there shall not be any adverse impacts due to quarrying operation on the nearby human habitations, by way of pollution to the environment.

12. A minimum distance of 15 mts. From any civil structure shall be kept from the periphery of any excavation area.

13. Depth of quarrying shall be 2m above the ground water table /approved depth of mining whichever is lesser to be considered as a safe guard against Environmental Contamination and over exploitation of resources.

14. The mined out pits should be backfilled where warranted and area should be suitably landscaped to prevent environmental degradation. The mine closure plan as furnished in the proposal shall be strictly followed with back filling and tree plantation.

15. Wet drilling method is to be adopted to control dust emissions. Delay detonators and shock tube initiation system for blasting shall be used so as to reduce vibration and dust.

16. Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities.



17. The explosives shall be stored at site as per the conditions stipulated in the permits issued by the licensing Authority.
18. Blasting shall be carried out after announcing to the public adequate through public address system to avoid any accident.
19. A study has to be conducted to assess the optimum blast parameters and blast design to keep the vibration limits less than prescribed levels and only such design and parameters should be implemented while blasting is done. Periodical monitoring of the vibration at specified location to be conducted and records kept for inspection.
20. The Proponent shall take appropriate measures to ensure that the GLC shall comply with the revised NAAQ norms notified by MoEF, GoI on 16.11.2009.(GLC = Ground Level Concentration), (NAAQ= Noise and Ambient Air Quality).
21. The following measures are to be implemented to reduce Air Pollution during transportation of mineral
- Roads shall be graded to mitigate the dust emission.
 - Water shall be sprinkled at regular interval on the main road and other service roads to suppress dust.
22. The following measures are to be implemented to reduce Noise Pollution
- Proper and regular maintenance of vehicles and other equipment.
 - Limiting time exposure of workers to excessive noise.
 - The workers employed shall be provided with protection equipment and earmuffs etc.
 - Speed of trucks entering or leaving the mine is to be limited to moderate speed of 25 kmph to prevent undue noise from empty trucks.
23. Measures should be taken to comply with the provisions laid under Noise Pollution (Regulation and Control) (Amendment) Rules, 2010, dt:11.01.2010 issued by the MoE&F, GoI to control noise to the prescribed levels.
24. Suitable conservation measures to augment groundwater resources in the area shall be planned and implemented in consultation with Assistant Director, Ground Water Division, PWD, Dharmapuri.
25. Rain water harvesting to collect and utilize the entire water falling in land area should be provided by construction of a storage tank with a capacity of 5,00,000 litres and the rain water harvested in the entire quarry area should be stored in it and used for the quarry purpose like dust prevention, wet drilling, providing water for green belt etc.
26. Permission from the competent authority should be obtained for drawl of ground water, if any, required for this project.

28. The following measures are to be adopted to control erosion of dumps:-

- i. Retention/ toe walls shall be provided at the foot of the dumps.
- ii. Worked out slopes are to be stabilized by planting appropriate shrub / grass species on the slopes.

29. Waste oils, used oils generated from the EM machines, mining operations, if any, shall be disposed as per the Hazardous Wastes (Management, Handling, and trans boundary movement) Rules, 2008 and its amendments thereof to the recyclers authorized by TNPCB.

30. Concealing the factual data or failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

31. Rain water getting accumulated in the quarry floor shall not be discharged directly to the nearby stream or water body. If it is to be let into the nearby water body, it has to be discharged into a silt trap on the surface within the lease area and only the overflow after allowing settling of soil be let into the nearby waterways. The silt trap should be of sufficient dimensions to catch all the silt water being pumped out during one season. The silt trap should be cleaned of all the deposited silt at the end of the season and kept ready for taking care of the silt in the next season. Photographs of the silt trap should be furnished before commencing quarry operation.

32. The lease holder shall undertake adequate safeguard measures during extraction of material and ensure that due to this activity, the hydro-geological regime of the surrounding area shall not be affected. Regular monitoring of ground water level and quality shall be carried out around the mine lease area during the mining operation. If at any stage, that the ground water is getting depleted carried out. The Assistant Director Ground water Division, PWD Dharmपुरi shall monitor.

33. No tree-felling shall be done in the leased area, except only with the permission from competent Authority.

34. To take up environmental monitoring of the proposed quarry site before, during and after the mining activities including vibration study data, water, air & flora/fauna environment, slurry water generated/disposed and method of disposal, involving a reputed academic Institution and it should be monitor by the District Environmental Engineer, TNPCB, Hosur on yearly basis.

35. It shall be ensured that the total extent of nearby quarries (existing, abandoned and proposed) located within 500 meter radius from the periphery of this quarry is not exceeding 25.00.0 hectares within the mining lease period of this application.



36. It shall be ensured that there is no habitation is located within 500 meter radius from the periphery of the quarry site and also ensure that no hindrance will be caused to the people of the habitation located within 500m radius from the periphery of the quarry site
37. Ground water quality monitoring should be conducted once in 3 Months.
38. Transportation of the quarried materials shall not cause any hindrance to the Village people/Existing Village road.
39. Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI once in three months.
40. Air sampling at intersection point should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI periodically once in six months.
41. Bunds to be provided at the boundary of the project site and it should be properly maintained.
42. The project proponent shall undertake plantation / afforestation work by planting the native species on all side of the lease area at the rate of 400/Ha. Suitable tall tree saplings should be planted on the bunds and other suitable areas in and around the work place.
43. At least 10 Neem trees should be planted around the boundary of the quarry site.
44. Floor of excavated pit to be levelled and sides to be sloped with gentle slope (Except for granite quarries) in the mine closure phase.
45. The Project Proponent shall ensure a minimum of 2.5% of the annual turnover will be utilized for the CSR Activity
46. The Project Proponent shall provide solar lighting system to the nearby villages
47. The Project Proponent shall comply with the mining and other relevant rules and regulations where ever applicable.
48. Rainwater shall be pumped out Via Settling Tank only.
49. Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary shall be developed and maintained.
50. As per MoEF & CC, GoI, Office Memorandum dated 30.03.2015, prior clearance from Forestry & Wild Life angle including clearance from obtaining committee of the National Board for Wild life as applicable shall be obtained before starting the quarrying operation, if the project site is located within 10KM from National Park and Sanctuaries.

the Mining plan is quarried even before the expiry of the quarry lease period and the same shall be monitored by the District Authorities.

52. Safety equipments to be provided to all the employees.

53. Safety distance of 50 m has to be provided in case of railway, reservoir, canal / odai.

54. The Assistant / Deputy Director, Department of Geology & Mining shall ensure that the proponent has engaged the blaster with valid Blasting license / certificate obtained from the competent authority before execution of mining lease.

55. The proponent shall furnish the Baseline data covering the Air, Water, Noise and land environment quality for the proposed quarry site before execution of mining lease.

56. The proponent shall erect the pillars in accordance with the Rules for depicting GPS details in the earmarked quality for the proposed quarry site before execution of mining lease.

57. The proponent shall furnish the data obtained from the Public Works Department regarding the details of ground water table in the quarry site.

58. The proponent has to display the name board at the quarry site showing the details of Proponent, lease period, extent etc., with respect to the existing activity before execution of mining lease.

59. The proponent has to display the name board at the quarry site showing the details of proponent, leased period, extent etc. with respect to the existing activity before execution of mining.

60. Heavy earth machinery equipments if utilized, after getting approval from the competent authority.

61. The environmental norms shall be monitored by the District Environmental Engineer, Tamil Nadu Pollution Control Board, Hosur.

62. The Assistant Director Public Works Department, Ground water Division Dharmapuri shall monitor whether the quarrying activity is carried out above the ground water level on yearly basis.

63. NOC for sanitary certificate shall be obtained from the Deputy Director of Health Services, Krishnagiri.

64. Yearly medical examination of the quarry workers should be carried out by a registered medical practitioner and the report should be filed in the quarry office in a separate file and copy should be sent to the Deputy Director, Health Services, Krishnagiri.



65. Closed circuit camera should be erected at the quarry site and the passage of vehicles in and out of the quarry should be recorded and the footage of the recording of the camera should be maintained and should be produced before the enforcing officials when ever called for.

66. Vehicles used for transportation of quarried materials should be fitted with GPS and monitored.

67. Pit mouth register should be maintained in on line.

68. Auditor report on the annual turn over amount should be submitted to the District Collector within one month from the end of the financial year.

69. 02.5% of the turn over amount should be utilized for the CSR activity after consultation with the District Collector.

B. General Conditions:

1. EC is given only on the factual records, documents and the commitment furnished in non judicial stamp paper by the proponent.
2. The Proponent shall obtain the Consent for Establishment from the TNPC Board before commencing the activity.
3. No change in mining technology and scope of working should be made without prior approval of the DEIAA, Krishnagiri.
4. No change in the calendar plan including excavation, quantum of mineral (minor mineral) should be made.
5. Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
6. Effective safeguards shall be adopted against health risks on account of breeding of vectors in the water bodies created due to excavation of earth.
7. A berm shall be left from the boundary of adjoining field having a width equal to at least half the depth of proposed excavation.
8. Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
9. Vehicular emissions shall be kept under control and be regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying them mineral shall not be overloaded.
10. Access and haul roads to the quarrying area should be restored in a mutually agreeable manner where these are considered unnecessary after extraction has been completed.
11. All Personnel shall be provided with protective respiratory devices including safety shoes, Masks, gloves etc. Supervisory people should be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should

- to dust and take corrective measures, if needed.
12. Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly. The workers shall be provided with personnel protective measures such as masks, gloves, boots etc.
 13. Workers/labourers shall be provided with facilities for drinking water and sanitation facility for Female and Male separately.
 14. The project proponent shall ensure that child labour is not employed in the project as per the sworn affidavit furnished.
 15. The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its regional office located at Chennai.
 16. The Environmental Clearance does not obviate the applicant/proponent of his obligation/requirement to obtain other statutory and administrative clearances from other statutory and administrative authorities.
 17. This Environmental Clearance does not imply that the other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would be considering the project on merits and be taking decisions independently of the Environmental Clearance
 18. The DEIAA, Krishnagiri may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.
 19. The DEIAA, Krishnagiri may cancel the environmental clearance granted to this project under the provisions of EIA Notification, 2006, at any stage of the validity of this environmental clearance, if it is found or if it comes to the knowledge of this DEIAA.KGI that the project proponent has deliberately concealed and/or submitted false or misleading information or inadequate data for obtaining the environmental clearance.
 20. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.
 21. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability Insurance Act, 1991, along with their amendments, draft Minor Mineral Conservation & Development Rules, 2010 framed under MMDR Act 1957, National Commission for protection of Child Right Rules,2006 and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/Hon'ble High Court of Madras and any other Courts of Law relating to the subject matter.
 22. Any other conditions stipulated by other Statutory/ Government authorities shall be complied.

V. The lessee should strictly adhere all the conditions imposed in the environmental clearance issued by The DEIAA Krishnagiri and consent order of the Tamil Nadu Pollution Control Board.



VI. The lessee should periodically renew the environmental clearance and the consent orders of the Tamil Nadu Pollution Control Board without any lapse.

VII. If any illicit quarrying is found in the area over an extent of 4.00.0 hectares in S.F.Nos. 78/1B (part) of Kothapetta Village, Krishnagiri Taluk and District before the date of execution of lease deed, this lease deed is liable to be cancelled and criminal action will be initiated.

VII. If the quarry area is situated within 10 km distance from any protected areas NOC from the Standing committee of NBWL should be obtained before commencing the quarry operation.

IX. If the lease holder wants to quarry more than the quantity permitted in the environmental clearance within the lease period, modified mining plan / scheme and Environment Clearance for the additional quantity should be submitted.

Sd/ C. Karthiravan,
DISTRICT COLLECTOR,
KRISHNAGIRI.

/ True copy/

30/5/18

For Collector,
Krishnagiri

30/5/18

To
Tmt. K. M. Vijaya
W/o Madhiazhagan
No. 58B Gandhi Nagar,
Krishnagiri Town and Taluk

Copy to the Revenue Divisional Officer, Krishnagiri

Copy to the Tahsildar, Krishnagiri.

Copy to the Village Administrative Officer, Kothapetta Village.

S. Dhanasekar
S. DHANASEKAR, M.Sc. (Geo)
Qualified Person



தமிழ்நாடு தமிழ்நாடு TAMILNADU இலா, X-219081
ASBA K.M. Vijaya
27/4/18 W/o. D. Madhazhagan
Krishnagiri
B. R. SATHISH KUMAR
S. V. L. 0079/88
Krishnagiri, Tamilnadu.

APPENDIX IV

(See Rule 19 and 22)

FORM OF AGREEMENT FOR QUARRYING AND CARRYING AWAY MINOR MINERALS FROM RYOTWARI LANDS IN WHICH THE MINERALS BELONG TO GOVERNMENT.

District Collector, Krishnagiri Proceedings Roc. 419 /2017 (Mines-2) dated 30.05.2018.

AGREEMENT made this 30th day of May 2018 between Tmt. K.M. Vijaya W/o Madhazhagan No. 58B Gandhi Nagar, Krishnagiri Town and Taluk (hereinafter referred to as "the registered holder," which term shall include in these presents where the context so admits include also his heirs, executors, administrators, legal representatives and assigns) of the one part and the Governor of Tamil Nadu (hereinafter called "the Government" which term shall where the context so admits, include also his successors in office and assigns) of the other part;

LESSEE

LESSOR
DISTRICT COLLECTOR

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WHEREAS the registered holder holds (amongst others) the lands described in the schedule hereunder written (hereinafter referred to as "the said lands")

AND WHEREAS, the registered holder has made application to the Collector of the District of Krishnagiri (hereinafter referred to as "the collector") seeking grant of quarrying lease for quarrying Rough stone in the said lands and to deposit mining waste in the said lands and has lodged with the Collector an accurate map or sketch of the said lands;

AND WHEREAS, the Collector, acting for and on behalf of the Government has granted a quarrying lease to the registered holder and allowed him to commence quarrying operations for Rough stone in the said lands and to deposit mining waste thereon by the registered holder;

AND WHEREAS, the registered holder have deposited with the Collector, the sum of Rs. 5,000/- (Rupees five thousand only) as security against any loss or damage which may be incurred by the Government, by reason of any of the said lands being rendered unfit for cultivation by any mining operations therein of the registered holder or by the deposit of mining waste thereon by the registered holder;

NOW THESE PRESENTS WITNESS and the registered holder doth hereby agree with the Government in the manner following, that is to say :-

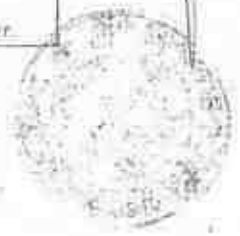
1. The registered holder shall be at liberty at all times during the period of the lease to carry on mining operations for Rough stone in the said lands in a proper and workman like manner and to deposit mining waste on the said lands and shall at all times be answerable and accountable to the Government for all acts and defaults by any of his nominees, servants or agents in carrying on such operations or in making such deposit.
2. The registered holder shall and will on the _____ day of _____ next and on the _____ day of _____ every succeeding year during so long as he shall have carried on any such mining operations as aforesaid pay to the Collector for and on behalf of the Government in addition to the land assessment for the time being payable in respect of the said lands, seigniorage on the minor minerals at the rate specified in Appendix II to the TamilNadu Minor Minerals Concession Rules, 1959.
3. The registered holder shall and will keep correct accounts in such form as the Collector shall from time to time require and direct showing the quantities and other particulars of all minerals obtained by the registered holder from the said lands and also the number of persons employed in carrying on the said mining operations therein and shall from time to time when so directed by the Collector prepare and maintain complete and correct plans of all mines and workings in the said lands and shall allow any officer hereunto authorised by the Commissioner/ Director of Geology and Mining, Tamil Nadu from time to time and at any time to examine such accounts and any such plans and shall when so required supply and furnish all such informations and returns all or any of the matter aforesaid as the Government shall, from time to time, require and direct.
4. The registered holder shall and will at all times allow any officer authorised by the Commissioner/Director of Geology and Mining, Tamil Nadu in that behalf to enter upon any part of the said lands where any mining operations may be carried on for the purpose of inspecting the same.

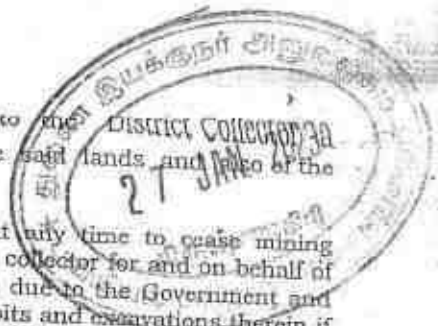
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 Registering Officer

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DISTRICT COLLECTOR





5. The registered holder shall forthwith send to the District Collector a report of any accident which may occur at or in the said lands and also of the discovery of any mineral other than Rough stone.

6. It shall be lawful for the registered holder at any time to cease mining operations under these presents provided he shall pay to collector for and on behalf of the government, land assessment, cess and seigniorage due to the Government and shall restore the said lands or fence or fill in abandoned pits and excavations therein if required by the collector and upon his so doing these presents shall cease and determine.

7. In case the registered holder shall relinquish the whole or any part of the said lands or in case of the expiry or sooner determination of this agreement then and in any such case, he shall restore the lands so relinquished or so much thereof as the collector shall require to be restored or so much thereof as the Collector shall require to be restored to a state fit for cultivation or shall securely and permanently fence or fill in all such abandoned pits and excavations there in as the collector shall require to be so fenced or filled in, and in case the registered holder shall fail or neglect to restore any such land which he shall be required to restore to a state fit for cultivation or to so fence, or fill in any such abandoned pit, or excavation which he shall be required to so fence, or fill in them and in any such case, it shall be lawful for the Collector to so restore any such lands, or as the case may be to so fence or fill any such pits or excavation at the expense of the registered holder and to apply the said sum of Rs 5,000/- (Rupees five thousand only) so deposited in or towards the cost of so doing and to deduct from the amount of the said deposit and retain on behalf of the Government a sum equal to thirty times the assessment of the said lands which shall have been rendered unfit for cultivation. If however, the amount of deposit is not sufficient to cover the cost of such restoration of fencing or filling in or to meet thirty times the assessment on the area rendered uncultivable, it shall be lawful for the Government to recover the balance by resort to civil court.

8. The registered holder shall not be entitled to any remission of assessment in respect of any of the said lands which shall be rendered unfit for surface cultivation by the carrying on of any mining operations or by the deposit of mining waste, unless thirty times the assessment thereon has already been deducted under the preceding clause.

9. The registered holder shall not assign, lease or part with the possession of the said lands or any part thereof for the whole or any part of the said term without previous intimation in writing to the Collector.

10. If the registered holder does not intend to carry on mining operations himself, but intends to lease out the right to do so to another person, the registered holder and his Lessee shall enter into an agreement with Government binding themselves jointly and severally to accept the conditions and stipulations herein contained which agreement shall be in the Form set out in Appendix V to the Tamil Nadu Minor Mineral Concession Rules, 1959.

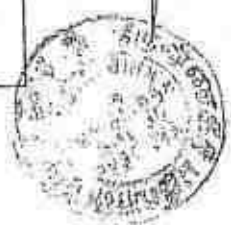
11. All land assessment, cess and seigniorage payable under these presents shall be recoverable under the provisions of the TamilNadu Revenue Recovery Act, 1864, as if they were arrears of land revenue.

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LESSOR
DISTRICT COLLECTOR





12. In the event of any breach by the registered holder by any of the conditions of this agreement, it shall be lawful for the Government to levy enhanced seigniorage or for the Collector to give notice in writing to the registered holder of his intention to cancel these presents whereupon the same shall stand cancelled but without prejudice to any rights which the Government may have against the patta in respect of any antecedent claim or breach of covenant or condition.

13. Any notice to be given to the registered holder may be addressed to his last known place of abode and where a notice has been so addressed, it shall be deemed to have been duly served for the purpose of these presents.

14. Should any question or dispute arise regarding the agreement executed in pursuance of these Rules or any matter or thing connected therewith or the powers of the registered holder thereunder, the amount or payment of the seigniorage fee or area assessment made payable thereby, the matter in issue shall be decided by the Commissioner/ Director of Geology and Mining. In case the registered holder/registered holders, Lessee/Lessees is/ are not satisfied with the decision of the Commissioner/ Director of Geology and Mining, the matter shall be referred to the State Government for decision.

15. The registered holder shall abide by the conditions laid down in the payment of Wages Act, 1936 (Central Act IV of 1936), the Mines Act, 1952 (Central Act XXXV of 1952) and the Indian Explosives Act, 1884. (Central Act IV of 1884).

16. For the purpose of calculation of stamp duty, The total anticipated seigniorage fee for entire lease period of five years Rs. 6,37,72,156/-, area assessment for five years Rs. 3,000/- and security deposit amount of Rs.10,000/- were taken into account.

17. The lease period is five years from th 30 day of May 2018 to day of 2nd May 2023

18 SEPCIAL CONDITIONS :

- A safety zone of 7.5 mts should be left out for the adjacent patta lands.
- At any cost no quarrying should be carried out in the adjacent Government land and no hinderance should be given to the public.
- Mining plan shall be prepared by in corporating all the details as proposed in the Minor Mineral Conservation and Development Rules 2010.
- Mining Plan shall be prepared by the in corporating all the details as proposed in the letter No. SEIAA-TN/Minor Minerals/2012 dated 17.04.2013 of the State Level Environment Impact Assessment Authority, Tamil Nadu.
- Quarrying activity should be carried out only from 7.00 A.M to 5.00 P.M.
- When quarried material are transported necessary permits had been produced before the forest check post officials and necessary entries should be made in the register.

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LESSOR
DISTRICT COLLECTOR





- g) The lessee should get the consent for operation from the Pollution Control Board before the commencement of quarrying operation.
- h) The grantee should sent the notice for opening of the quarry to the Director of Mines safety, Bangalore.
- i) Quarrying operation should be carried out only after appointing Mines Manager/ Mines Mate and Foremen.
- j) At any cost the blasting activity should be carried out under the Supervision of Mines Mate.
- k) If any accident occur in the quarry area the lessees should give intimation to the Director of Mines safety Bangalore and District Collector, Krishnagiri at once and lessee is solely responsible for any violation.

19. நிபந்தனைகள்

- (1) குத்தகை காலம், குத்தகை ஒப்பந்தப்பத்திரம் நிறைவேற்றும் தாளிலிருந்து ஐந்து ஆண்டுகளாகும்.
- (2) குவாரி குத்தகை வழங்கப்பட்ட இடத்தில் குவாரி செய்யும் வேலிக்கல்/ குண்டுக்கல்/ கட்டுக்கல்/ சக்ளை மற்றும் ஜக்ஸி ஆகியவற்றை மேற்படி இடத்திலிருந்து வெளியில் எடுத்துச் செல்வதற்கு முன்பு அவை ஒவ்வொன்றிற்கும் அவற்றிற்குரிய வீதத்தில் கீரியபிடி தீர்வை செலுத்தி இவ்வலுவலகத்தில் பரமிட் மற்றும் நடைச்சீட்டு பெற்ற பின்புதான் மேற்படி கனிமங்களை குவாரியிலிருந்து வெளியில் எடுத்துச் செல்ல வேண்டும். 1959 ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், இணைப்பு II-ல் அல்லப்போது அரசால் நிர்ணயிக்கப்படும் வீதத்தில் பரப்பு தீர்வை செலுத்த வேண்டும். மேற்கண்ட தொகையைத் தவிர அரசால் அல்லப்போது நிர்ணயிக்கப்படும் இதர தொகைகளையும் குத்தகைதாரர் செலுத்த வேண்டும்.
- (3) குத்தகை இடத்திற்கு அருகிலுள்ள குடியிருப்புகள், கட்டடங்கள், நீர்நிலைகள், குளங்களின் கரைகள், மரங்கள், சாலைகள், வண்டிப்பாதைகள், நடைபாதைகள் மற்றும் இதர பொதுச் சொத்துக்களுக்கு பாதுகாப்புமீறாமல் குவாரி செய்ய வேண்டும்.
- (4) குத்தகை வழங்கப்பட்ட இடத்திற்கு அருகாமையில் உள்ள பட்டாநார்கள் மற்றும் பொது மக்களுக்கு பாதுகாப்புமீறாமல் குவாரி செய்ய வேண்டும்.
- (5) குத்தகை வழங்கப்பட்ட இடத்திற்கு அருகிலுள்ள ரயில்பாதைகள், சாலைகள், மின்சாரம் மற்றும் தொலைபேசி கம்பிகளுக்கு 50 மீட்டரும், குடியிருப்பு பகுதியிலிருந்து 300 மீட்டரும், நடைபாதைகள், கிணர் சாலைகளுக்கு 10 மீட்டரும் பாதுகாப்பு இடைவெளி விட்டு குவாரி செய்ய வேண்டும்.
- (6) மாவட்ட ஆட்சித்தலைவர் (அல்லது) அரசால் அதிகாரம் வழங்கப்பட்ட அலுவலரை குத்தகை வழங்கப்பட்ட இடத்தைப் பார்வையிடவும், குவாரி பதிவேடுகள், ஆவணங்கள் மற்றும் கணக்கை சரிபார்க்கவும் அனுமதிக்க வேண்டும். இது சம்பந்தமாக அவர்கள் கோரும் அனைத்து விரிவாக்கங்களையும் வழங்க வேண்டும்.
- (7) கற்றுப்பற சூழ்நிலை பாதுகாப்பு, கனிம பாதுகாப்பு, தொழிலாளர் பாதுகாப்பு முதலியவற்றைக் கருத்தில் கொண்டு விட்குள்ள அடிப்படையில் திறமையுடன் முறையாகக் குவாரி செய்ய வேண்டும்.
- (8) மாவட்ட ஆட்சித்தலைவர் மற்றும் ஆணையர், புவியியல் மற்றும் கற்கள்துறை, ஆகியோரால் அதிகாரம் வழங்கப்பட்ட அலுவலரை மேலே பத்தி (5)-ல் குறிப்பிட்டுள்ள நிபந்தனைகள் தொடர்பாகவும், மேற்கண்ட அலுவலர்களின் ஆணையை நிறைவேற்றவும் குத்தகை வழங்கப்பட்ட இடத்தைப் பார்வையிட அனுமதிக்க வேண்டும்.
- (9) குத்தகைதாரரின் செலவில் குத்தகை ஒப்பந்தப்பத்திரம் நிறைவேற்றி அதனை பதிவு செய்வதற்கு முன்பு குத்தகை இடத்தில் குவாரி மற்றும் இது சம்பந்தப்பட்ட வேலைகளைத் தொடங்கக்கூடாது.
- (10) குத்தகை வழங்கப்பட்டுள்ள இடத்திற்குள் எல்லையிலிருந்து 7.5 மீட்டர் தூரத்திற்குள் குவாரி செய்யக் கூடாது.
- (11) பொது சாலைகளிலிருந்து குத்தகை வழங்கப்பட்ட இடத்திற்குச் செல்ல பாதை வசதி குத்தகைதாரர் சொந்த பொறுப்பில் செய்து கொள்ள வேண்டும்.

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- (12) குத்தகை ஒப்பந்தப்பத்திரத்தின் இணைத்துள்ள வரையடத்தில் காட்டியிருக்கப்பட்ட கற்றிலும் எல்லைக்கற்கள் றட்டு அவற்றைச் சரியானபடி பராமரிக்க வேண்டும்.
- (13) 1959 ஆம் வருடத்திய தமிழ்நாடு சிறுகனியம் சலுகை விதிகள் இணைப்பு XII மற்றும் XII-ல் உள்பட படிவங்களில் முறையே இசைவாணைச்சீட்டு மற்றும் நடைச்சீட்டிணைத் தயார் செய்து அவற்றில் மாஸ்ட் ஆட்சித்தலைவரால் அதிகாரம் வழங்கப்பட்ட அலுவலரின் கையொப்ப முத்திரை மற்றும் ஆலுவைக் முத்திரைகள் பெற்று குவாரியிலிருந்து குண்டுக்கல், சுட்டுக்கல், சக்கை மற்றும் ஐஸ்லி ஆகியவற்றை வெளியில் எடுத்துச் செல்லும் ஒய்வொரு வகைத்திற்கும் ஒவ்வொரு நடைக்கும் வரையடப்ப வேண்டும். குண்டுக்கல், சுட்டுக்கல், சக்கைகல், ஐஸ்லி ஆகியவற்றை ஏற்றிச் செல்லும் ஒவ்வொரு வகைக்கும் அதனைச் சேதனைச் செய்வதற்கு அதிகாரம் பெற்ற அலுவலர் சேதனைச் செய்ப்போது நடைச்சீட்டிணைக் காண்பிக்க வேண்டும். இசைவாணைச்சீட்டு மற்றும் நடைச்சீட்டின் நகல்களை குவாரியில் வைத்திருக்க வேண்டும். முறையான இசைவாணைச்சீட்டு மற்றும் நடைச்சீட்டுகள் இல்லாமல் கனிமங்களை ஏற்றிச் செல்லும் வாகனங்கள் 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனியம் சலுகை விதிகள் மற்றும் கரங்கங்கள் மற்றும் கனிமங்கள் (ஒழுங்குமுறை மற்றும் அபிவிருத்தி) சட்டம், 1957-ன்படி கையப்படுத்தப்பட்டு, குத்தகைதாரர் யிது நடவடிக்கை எடுக்கப்படுவதுடன் குவாரிக் குத்தகையும் ரத்து செய்ய நடவடிக்கை எடுக்கப்படும்.
- (14) குத்தகை வழங்கப்பட்ட இடத்தை குண்டுக்கல், சுட்டுக்கல், சக்கை மற்றும் ஐஸ்லி குவாரி செய்ய மட்டும் பயன்படுத்த வேண்டும். குத்தகை உரிய ஆணை அல்லது குத்தகை ஒப்பந்தப்பத்திரத்தில் தவறுதலாக கண்ட விவரம் குறிக்கப்பட்டு இருந்தால் அதனை எந்த நேரத்திலும் திருத்துவதற்கு மாஸ்ட் ஆட்சியருக்கு அதிகாரம் உண்டு. குத்தகைதாரர் அதனடிப்படையில் எந்த உரிமையும் கோரமுடியாது.
- (15) மெருகேற்றுவதற்கும், அபல் நட்பிற்கு ஏற்றுமதி செய்வதற்கும் பயன்படும் பெரிய கற்றுகள்கள்கள் வடிவத்தில் கற்குவாரி செய்யக் கூடாது.
- (16) குத்தகை ஒப்பந்தப்பத்திரத்தில் குறிக்கப்படாத வேறு ஏதாவதொரு கனியம் கிடைத்தால், அதனை சம்பந்தப்பட்ட அலுவலரின் அனுமதியைப் பெறாமலும், அதற்குரிய சீனியரேஜ் தொகையைச் செலுத்தாமலும் எடுக்கக்கூடாது. புதிய கனியம் கிடைத்த விவரத்தை 30 தினங்களுக்குள் தெரிவிக்காமல் எடுத்துச் சென்றால் இக்குற்றத்திற்கு அந்த கனிமத்திற்குரிய சாதாரண சீனியரேஜ் கட்டணத்தைப்போல் 15 மடங்குவரை மாஸ்ட் ஆட்சித்தலைவரால் அபராதம் விதித்து வசூலிக்கப்படும்.
- (17) குத்தகை காணம் முடிந்தபிறகு, குத்தகை வழங்கப்பட்ட இடத்திலிருந்து குண்டுக்கல், சுட்டுக்கல், சக்கை மற்றும் ஐஸ்லியை குவாரி செய்து வெளியில் எடுத்துச் செல்ல குத்தகைதாரருக்கு உரிமையில்லை.
- (18) குத்தகை காணம் முடிவடைந்த பிறகு குத்தகை இடத்தில் எஞ்சின, மெஷின் போன்ற எந்தவிதமான தளவாட பொருட்களையும் வைத்திருக்கக்கூடாது. அவற்றை குத்தகை காலத்தில் கடைசி நாளன்று குத்தகைதாரர் எடுத்துச் சென்றுவிட வேண்டும்.
- (19) குத்தகையை வேறு எவருக்கும் உள் குத்தகைக்கு விடக்கூடாது.
- (20) குவாரி செய்வதில் இழப்பு ஏற்படின் நட்பாடு கேட்கக்கூடாது.
- (21) குவாரியில் வேலை செய்யும் தொழிலாளர்கள் மற்றும் இதர நபர்களுக்கு விபத்து ஏதாவது ஏற்படின் அதற்கு முழுப் பொறுப்பினையும் குத்தகைதாரரைச்சேரும். இதற்கு அரசு பொறுப்பில்லை.
- (22) அரசுக்கு செலுத்த வேண்டிய தொகையை உரிய காலத்திற்குள் செலுத்தவில்லை என்றால் அத்தொகை 24 % அல்லது அரசால் அல்லப்போது நிர்ணயிக்கப்படும் வீதத்தில் வட்டிபுடன் குத்தகைதாரரிடமிருந்து வசூலிக்கப்படும்.
- (23) அரசுக்கு செலுத்த வேண்டிய பாக்கித் தொகை தமிழ்நாடு வருவாய் வசூல் சட்டம் 1964-ன் கீழ் வசூலிக்கப்படும்.
- (24) குத்தகை நிபந்தனைகள், 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனியம் சலுகை விதிகள், அரசு ஆணையர், புவியியல் மற்றும் கரங்கத்துறை, மாஸ்ட் ஆட்சித்தலைவர் ஆகியோரது ஆணைகள் நிரப்பும் பிறகுக்கு அபராதம் விதிப்பதோடு அல்லாமல் குத்தகைதாரருக்கு நேர்முக விவரணைக்கு வாய்ப்பளித்த பின்பு குத்தகை உரியம் ஏற்று செய்ய நடவடிக்கை எடுக்கப்படும்.
- (25) அரசின் அல்லப்போதைய ஆணைகளுக்கேற்ப நிபந்தனைகளை மாற்றி அதையக்கவோ, நீக்கவோ, சுட்டுதலாக கேட்கவோ, மாஸ்ட் ஆட்சித்தலைவருக்கு முழு அதிகாரம் உண்டு.
- (26) மேற்கூறிய நிபந்தனைகளுடன் 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனியம் சலுகை விதிகள், கரங்கங்கள் மற்றும் கனிமங்கள் (ஒழுங்குமுறை மற்றும் அபிவிருத்தி) சட்டம் 1957, மாஸ்ட் ஆட்சித்தலைவர் ஆகியோரால் அல்லப்போது பிறப்பிக்கப்படும் ஆணைகள் குத்தகைதாரரைக் கட்டுப்படுத்தும்.
- (27) குவாரிகள்/கரங்கங்களுக்கு பொருந்தக்கூடிய தொழிலாளர் சட்டங்களுக்கு கட்டுப்பட்டு குத்தகைதாரர் குவாரி செய்யவேண்டும். தவறினால் சம்பந்தப்பட்ட அரசின் கட்டப்ப்புள்ள நடவடிக்கைகளுக்கு குத்தகைதாரர் உள்ளாக வேண்டி இருக்கும்.

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(28) இந்திய வெய்மருந்து சட்டம் 1884 (Central Act IV of 1884)-ன் படி 21-ம் பிரிவு கீழ்க் குத்தகைதாரர் பாண்டுகளை வெட்டிவைத்து உடைக்க வேண்டும். தவறும் பட்சத்தில் குத்தகைதாரர் கடை தண்டனைக்கு உட்படான கோண்டிபிடுங்கும்.

(29) குத்தகைதாரர் குவாரியில் குறுந்தொகுதி மின்னளிகள் பணியமர்த்தக்கூடாது.

20) a) The conditions imposed by the Tamil Nadu Pollution Control Board in the consent to establishment in Air and Water Pollution Act should be strictly adhered and the consent should be renewed periodically.

b) The Environment Clearance issued by the DEIAA, Krishnagiri should be renewed within the prescribed time limit.

21) Conditions imposed.

1. i) This Environmental Clearance is granted to Mining of Rough Stone for the production quantity of 10,80,884 cbm of rough stone for the period of five years from the date of execution of the mining lease period.

ii) The approved quantity of rough stone to be quarries = 10,80,884 cbm

iii) Depth of mining permitted = 71 mts. (25 mts above ground level and 46 mts below ground level) from a period of 5 years.

2. A. Conditions to be complied before the commencing of mining operation

1. The applicant has to obtain land use classification as industrial use before issue / renewal of mining lease.

2. NOC from the Standing committee of the NBWL shall be obtained, if protected areas are located within 10 Km from the proposed project site.

3. The project proponent shall comply the conditions laid down in section V Rule 36 of Tamil Nadu Minor Mineral Concession Rules, 1959.

4. A copy of the Environment Clearance letter shall be sent by the proponent to the concerned Panchayat, Town Panchayat / Panchayat union/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the proponent and also kept at the site, for the general public to see.

5. Quarry lease area should be demarcated on the ground with wire fencing to show the boundary of the lease area on all sides with red flags on every pillar shall be erected before commencement of quarrying.

6. The proponent shall ensure that First Aid Box is available at site.

7. The excavation activity shall not alter the natural drainage pattern of the area.

8. The excavated pit shall be restored by the project proponent for useful purposes. In this regard, the proponent shall deposit a sum of Rs. 5,00,000/ (Rupees Five Lakhs only) in the name of District Collector Krishnagiri in the form of fixed deposit. The said fixed deposit will be refunded after restoration of pit after end of the lease period.

9. The proponent shall quarry and remove only in the permitted areas as per the approved Mining Plan details.

10. The quarrying operation shall be restricted between 7AM and 5 PM.

11. The proponent shall take necessary measures to ensure that there shall not be any adverse impacts due to quarrying operation on the nearby human habitations, by way of pollution to the environment.

12. A minimum distance of 15 mts. From any civil structure shall be kept from the periphery of any excavation area.

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[Signature]

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<i>[Signature]</i> Registering Officer.	

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13. Depth of quarrying shall be 2m above the ground water table whichever is lesser to be considered as a safe guard against Environmental Contamination and over exploitation of resources.
14. The mined out pits should be backfilled where warranted and area should be suitably landscaped to prevent environmental degradation. The mine closure plan as furnished in the proposal shall be strictly followed with back filling and tree plantation.
15. Wet drilling method is to be adopted to control dust emissions. Delay detonators and shock tube initiation system for blasting shall be used so as to reduce vibration and dust.
16. Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities.
17. The explosives shall be stored at site as per the conditions stipulated in the permits issued by the licensing Authority.
18. Blasting shall be carried out after announcing to the public adequate through public address system to avoid any accident.
19. A study has to be conducted to assess the optimum blast parameters and blast design to keep the vibration limits less than prescribed levels and only such design and parameters should be implemented while blasting is done. Periodical monitoring of the vibration at specified location to be conducted and records kept for inspection.
20. The Proponent shall take appropriate measures to ensure that the GLC shall comply with the revised NAAQ norms notified by MoEF, GoI on 16.11.2009. (GLC= Ground Level Concentration), (NAAQ= Noise and Ambient Air Quality).
21. The following measures are to be implemented to reduce Air Pollution during transportation of mineral
 - i. Roads shall be graded to mitigate the dust emission.
 - ii. Water shall be sprinkled at regular interval on the main road and other service roads to suppress dust.
22. The following measures are to be implemented to reduce Noise Pollution
 - i. Proper and regular maintenance of vehicles and other equipment.
 - ii. Limiting time exposure of workers to excessive noise.
 - iii. The workers employed shall be provided with protection equipment and earmuffs etc.
 - iv. Speed of trucks entering or leaving the mine is to be limited to moderate speed of 25 kmph to prevent undue noise from empty trucks.
23. Measures should be taken to comply with the provisions laid under Noise Pollution (Regulation and Control) (Amendment) Rules, 2010, dt:11.01.2010 issued by the MoE&F, GoI to control noise to the prescribed levels.
24. Suitable conservation measures to augment groundwater resources in the area shall be planned and implemented in consultation with Assistant Director, Ground Water Division, PWD, Dharmapuri.
25. Rain water harvesting to collect and utilize the entire water falling in land area should be provided by construction of a storage tank with a capacity of 5,00,000 litres and the rain water harvested in the entire quarry area should be stored in it and used for the quarry purpose like dust prevention, wet drilling, providing water for green belt etc.
26. Permission from the competent authority should be obtained for drawl of ground water, if any, required for this project.

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
DISTRICT COLLECTOR





27. Topsoil, if any, shall be stacked properly with proper measures and should be used for plantation purpose.
28. The following measures are to be adopted to control erosion of slopes:
 - i. Retention/ toe walls shall be provided at the end of the slopes.
 - ii. Worked out slopes are to be stabilized by planting appropriate shrubs / grass species on the slopes.
29. Waste oils, used oils generated from the EM machines, mining operations, if any, shall be disposed as per the Hazardous Wastes (Management, Handling, and trans boundary movement) Rules, 2008 and its amendments thereof to the recyclers authorized by TNPCC.
30. Concealing the factual data or failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
31. Rain water getting accumulated in the quarry floor shall not be discharged directly to the nearby stream or water body. If it is to be let into the nearby water body, it has to be discharged into a silt trap on the surface within the lease area and only the overflow after allowing settling of soil be let into the nearby waterways. The silt trap should be of sufficient dimensions to catch all the silt water being pumped out during one season. The silt trap should be cleaned of all the deposited silt at the end of the season and kept ready for taking care of the silt in the next season. Photographs of the silt trap should be furnished before commencing quarry operation.
32. The lease holder shall undertake adequate safeguard measures during extraction of material and ensure that due to this activity, the hydro-geological regime of the surrounding area shall not be affected. Regular monitoring of ground water level and quality shall be carried out around the mine lease area during the mining operation. If at any stage, that the ground water is getting depleted carried out. The Assistant Director Ground water Division, PWD Dhampuri shall monitor.
33. No tree-felling shall be done in the leased area, except only with the permission from competent Authority.
34. To take up environmental monitoring of the proposed quarry site before, during and after the mining activities including vibration study data, water, air & flora/fauna environment, slurry water generated/disposed and method of disposal, involving a reputed academic institution and it should be monitored by the District Environmental Engineer, TNPCC, Hosur on yearly basis.
35. It shall be ensured that the total extent of nearby quarries (existing, abandoned and proposed) located within 500 meter radius from the periphery of this quarry is not exceeding 25.00.0 hectares within the mining lease period of this application.
36. It shall be ensured that there is no habitation is located within 500 meter radius from the periphery of the quarry site and also ensure that no hindrance will be caused to the people of the habitation located within 500m radius from the periphery of the quarry site.
37. Ground water quality monitoring should be conducted once in 3 Months.
38. Transportation of the quarried materials shall not cause any hindrance to the Village people/Existing Village road.
39. Free Silica test should be conducted and reported to TNPCC, Department of Geology and Mining and Regional Director, MoEF, GOI once in three months.
40. Air sampling at intersection point should be conducted and reported to TNPCC, Department of Geology and Mining and Regional Director, MoEF, GOI periodically once in six months.

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 DISTRICT COLLECTOR


41. Bunds to be provided at the boundary of the project properly maintained.
42. The project proponent shall undertake plantation of the native species on all side of the lease area. Suitable tall tree saplings should be planted on the bunds and other suitable areas in and around the work place.
43. At least 10 Neem trees should be planted around the boundary of the quarry site.
44. Floor of excavated pit to be levelled and sides to be sloped with gentle slope (Except for granite quarries) in the mine closure phase.
45. The Project Proponent shall ensure a minimum of 2.5% of the annual turnover will be utilized for the CSR Activity
46. The Project Proponent shall provide solar lighting system to the nearby villages
47. The Project Proponent shall comply with the mining and other relevant rules and regulations where ever applicable.
48. Rainwater shall be pumped out Via Settling Tank only
49. Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary shall be developed and maintained.
50. As per MoEF & CC, Govt. Office Memorandum dated 30.03.2015, prior clearance from Forestry & Wild life angle including clearance from obtaining committee of the National Board for Wild life as applicable shall be obtained before starting the quarrying operation, if the project site is located within 10KM from National Park and Sanctuaries.
51. The quarrying activity shall be stopped if the entire quantity indicated in the Mining plan is quarried even before the expiry of the quarry lease period and the same shall be monitored by the District Authorities.
52. Safety equipments to be provided to all the employees.
53. Safety distance of 50 m has to be provided in case of railway, reservoir, canal / odai.
54. The Assistant / Deputy Director, Department of Geology & Mining shall ensure that the proponent has engaged the blaster with valid Blasting License / certificate obtained from the competent authority before execution of mining lease.
55. The proponent shall furnish the Baseline data covering the Air, Water, Noise and land environment quality for the proposed quarry site before execution of mining lease.
56. The proponent shall erect the pillars in accordance with the Rules for depicting GPS details in the earmarked quality for the proposed quarry site before execution of mining lease.
57. The proponent shall furnish the data obtained from the Public Works Department regarding the details of ground water table in the quarry site.
58. The proponent has to display the name board at the quarry site showing the details of Proponent, lease period, extent etc., with respect to the existing activity before execution of mining lease.
59. The proponent has to display the name board at the quarry site showing the details of proponent, leased period, extent etc. with respect to the existing activity before execution of mining.
60. Heavy earth machinery equipments if utilized, after getting approval from the competent authority.
61. The environmental norms shall be monitored by the District Environmental Engineer, Tamil Nadu Pollution Control Board, Hosur.
62. The Assistant Director Public Works Department, Ground water Division Dharmapuri shall monitor whether the quarrying activity is carried out above the ground water level on yearly basis.
63. NOC for sanitary certificate shall be obtained from the Deputy Director of Health Services, Krishnagiri.



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- 64. Yearly medical examination of the quarry workers should be carried out by a registered medical practitioner and the report should be filed in the office in a separate file and copy should be sent to the District Collector, Erode, Tamil Nadu.
- 65. Closed circuit camera should be erected at the quarry site and the passage of vehicles in and out of the quarry should be recorded and the footage of the recording of the camera should be maintained and should be produced before the enforcing officials when ever called for.
- 66. Vehicles used for transportation of quarried materials should be fitted with GPS and monitored and vehicles should not carry the products more than the quantity allowed in the registration certificate.
- 67. Pit mouth register should be maintained in an line.
- 68. Auditor report on the annual turn over amount should be submitted to the District Collector within one month from the end of the financial year.
- 69. 02.5% of the turn over amount should be utilized for the CSR activity after consultation with the District Collector.

B. General Conditions:

- (1) EC is given only on the factual records, documents and the commitment furnished in non judicial stamp paper by the proponent.
- (2) The Proponent shall obtain the Consent for Establishment from the TNPC Board before commencing the activity.
- (3) No change in mining technology and scope of working should be made without prior approval of the SRILAA, Tamil Nadu.
- (4) No change in the calendar plan including excavation, quantum of mineral (minor mineral) should be made.
- (5) Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- (6) Effective safeguards shall be adopted against health risks on account of breeding of vectors in the water bodies created due to excavation of earth.
- (7) A berm shall be left from the boundary of adjoining field having a width equal to at least half the depth of proposed excavation.
- (8) Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
- (9) Vehicular emissions shall be kept under control and be regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying them mineral shall not be overloaded.
- (10) Access and haul roads to the quarrying area should be restored in a mutually agreeable manner where these are considered unnecessary after extraction has been completed.
- (11) All Personnel shall be provided with protective respiratory devices including safety shoes, Masks, gloves etc. Supervisory people should be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.

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<i>[Signature]</i> District Collector

LESSOR
DISTRICT COLLECTOR





- (12) Periodical medical examination of the workers shall be carried out and records maintained. For the purpose of examination of the workers should be drawn and full workers shall be provided with personnel protective means like gloves, boots etc.
- (13) Workers/labourers shall be provided with facilities for drinking water and sanitation facility for Female and Male separately.
- (14) The project proponent shall ensure that child labour is not employed in the project as per the sworn affidavit furnished.
- (15) The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its regional office located at Chennai.
- (16) The Environmental Clearance does not absolve the applicant/proponent of his obligation/requirement to obtain other statutory and administrative clearances from other statutory and administrative authorities.
- (17) This Environmental Clearance does not imply that the other statutory administrative clearances shall be granted to the project by the concerned authorities. Such authorities would be considering the project on merits and be taking decisions independently of the Environmental Clearance.
- (18) The SEIAA, Tamil Nadu may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.
- (19) The SEIAA, Tamil Nadu may cancel the environmental clearance granted to this project under the provisions of EIA Notification, 2006, at any stage of the validity of this environmental clearance, if it is found or if it comes to the knowledge of this DEIAA,KGI that the project proponent has deliberately concealed and/or submitted false or misleading information or inadequate data for obtaining the environmental clearance.
- (20) Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.
- (21) The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability Insurance Act, 1991, along with their amendments, draft Minor Mineral Conservation & Development Rules, 2010 framed under MMR Act 1957, National Commission for protection of Child Right Rules, 2005 and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/Hon'ble High Court of Madras and any other Courts of Law relating to the subject matter.
- (22) Any other conditions stipulated by other Statutory/ Government authorities shall be complied.
- 23. The lessee should strictly adhere all the conditions imposed in the environmental clearance issued by The DEIAA Krishnagiri and consent order of the Tamil Nadu Pollution Control Board.
- 23. The lessee should periodically renew the environmental clearance and the consent orders of the Tamil Nadu Pollution Control Board without any lapse.
- 24. If any illicit quarrying is found in the area over an extent of 2.30.0 hectares in S.F.No. 78/1B of Kothapetta Village, Krishnagiri Taluk and District before the date of execution of lease deed, this lease deed is liable to be cancelled and criminal action will be initiated.
- 25. If the quarry area is situated within 10 km distance from any protected areas NOC from the Standing committee of NBWL should be obtained before commencing the quarry operation.

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Document No. <u>1745</u> of 2018 of Desk <u>1</u>
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<i>[Signature]</i> Registering Officer.

LESSEE
DISTRICT COLLECTOR
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26. If the lease holder wants to quarry more than the quantity permitted in the environmental clearance within the lease period, modified mining plan scheme and Environment Clearance for the additional quantity should be submitted.

27. The lessee should obtain consent for operation of the Tamil Nadu Pollution Control Board before commencing quarry operations.

THE SCHEDULE

Taluk : KRISHNAGIRI
Village : KOTHAPETTA

SI No.	Survey FieldNumber	Extent Leased Out inhectares	Boundary			
			North S.F. No.	East S.F. No.	South S.F. No.	West S.F. No.
1	78/1B (part)	4.00.0	78/1(part), 78/3(patta)	78/1B (part) (patta)	78/1B (part), (patta)	78/1B (part) (patta)
	Total	4.00.0				

LESSEE



LESSOR
DISTRICT COLLECTOR



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Contains 21 Sheets 13 Sheet
Registering Officer.





IN WITNESS where of Tmt. K.M. Vijaya W/o Madhiashagan No. 588 Gandhi Nagar, Krishnagiri Town and Taluk "The lessee" and Thiru C.KATHERAVAN District Collector Krishnagiri acting for and on behalf of and by the order and direction of the Governor of Tamil Nadu have "The Lessor" hercunto set their hands.

LESSEE
[Signature]
Signed by the above named lessee in the presence of following witnesses.

[Signature]
LESSOR
DISTRICT COLLECTOR
KRISHNAGIRI
Signed by the above named lessor in the presence of following witnesses.

① N. SULLY N. SELVANAN.
S/o. D. Prabhakaran.
No. 14, 2nd Cross,
Block, P P Nagar, Krishnagiri.

[Signature]
DEPUTY DIRECTOR (S. Suresh)
Department of Geology and Mining
Collectorate, Krishnagiri.

② K. KATH
K. Manjunathan
No. 5. C.B. Road, Bangalore
Krishnagiri

[Signature] (S. Muthu)
ASSISTANT GEOLOGIST
Of the Dept. of Geology and Mining,
Collectorate, Krishnagiri.

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Registering Officer.

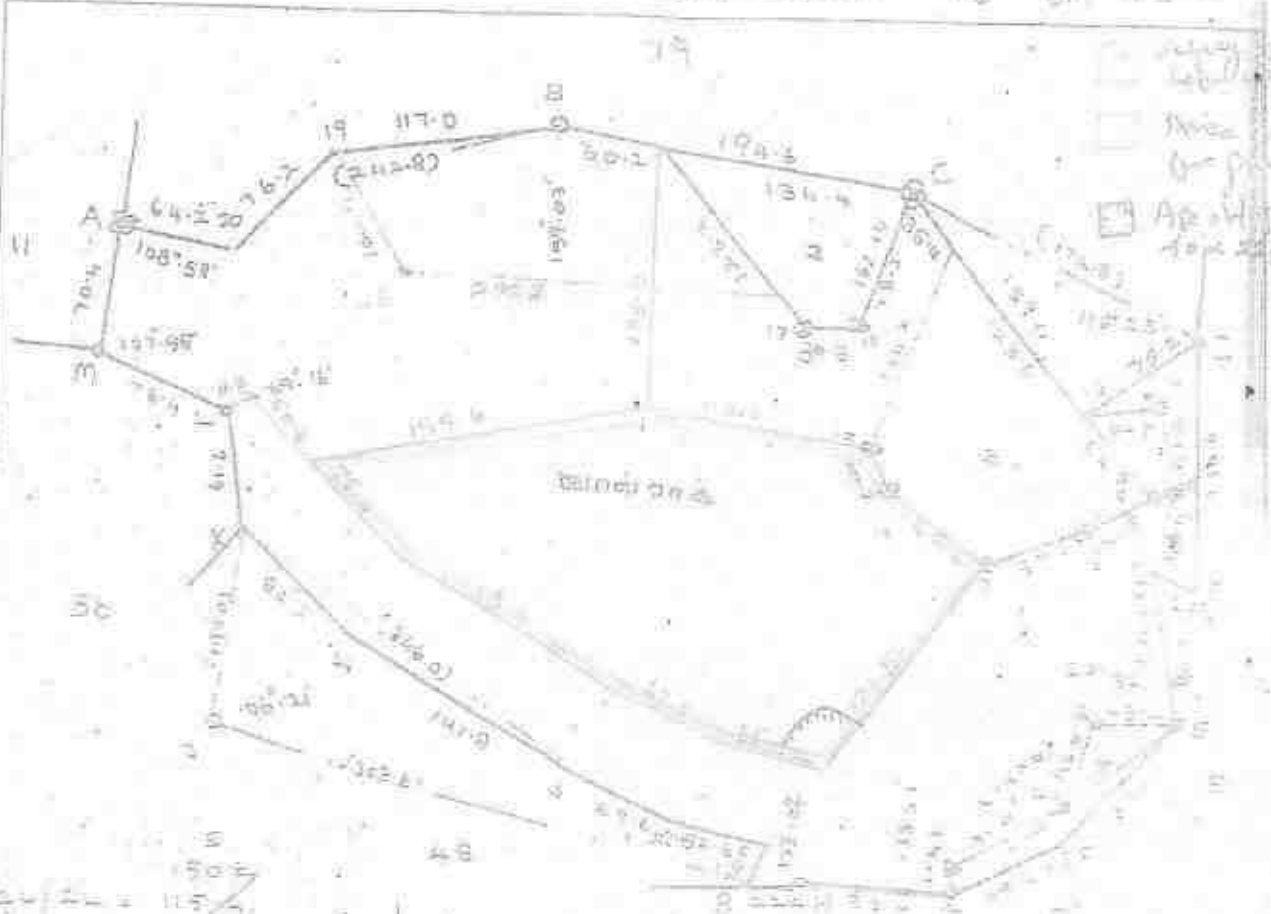


தரம்புரி

வட்டம் கிருஷ்ணகிரி

புரம் எண், 78

பரப்பு சென்டர் 16 சா. 40 ச.



- 1. கட்டிடம்
- 2. மரம்
- 3. கால்வாய்
- 4. பாதை
- 5. புவியியல்

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LESSEE

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KRSNAGIRI TA & BT

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சா. எண். 101 to 102

திருவள்ளூர் அலுவலகம்
27 JAN 2023
சென்னை
புதித்தெழுத்து எழுத்து

22/01/2023

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K.V. VINGALASAMY MANAMATHI
S. SATHYANARAYAN



REGISTRY OF MARRIAGES
& CIVIL SUPPLY OFFICE

MARRIAGE



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Contains 21 Sheets 17 Sheet
[Signature]
Registering Officer





भारत सरकार
GOVERNMENT OF INDIA



அடியமான் அங்குலன்
Adiyaman Anbalegan
பிறந்த நாள் / DOB : 06/05/1963
ஆண் / MALE

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புத்தகப் பதிவுகளைக் குறிக்கிறது



भारत सरकार
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UIDAI, Block No. 19A2
Sector 10, Gandhinagar, New Delhi - 110001

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Registering Officer.

பரீட்சைத் துறை அமைச்சர் அலுவலகம்
 எண் இணை சார்பதிவாளர் கிருஷ்ணகிரி, திருச்சூர்



சமீப ஆண்டு இந்திய முத்திரைச் சட்டம் கையாண்டு பிரிவில் சட்டம்

சமீப ஆண்டு வரிசை எண் 571

ஊர் காதல் நகர் கிருஷ்ணகிரி, கிருஷ்ணகிரி, தமிழ்நாடு இந்தியா கையாண்டு வரிசை எண் 571
 சம்பந்தமிருந்து 1 2018-ம் ஆண்டில் எழுதுவதற்கு இயக்குனரவர்களிடம் இருந்து சட்டம் 12-ல்
 ஆவணத்திற்காக இந்திய முத்திரைச் சட்டம் கையாண்டு பிரிவில் 124 குறையவாயிருந்த முத்திரைச் சட்டத்தை
 கையாண்டது என நான் இதன் மூலம் எண்ணிக்கையேன்.

சார்பதிவாளர் 1 எண் இணை சார்பதிவாளர் கிருஷ்ணகிரி சார்பதிவாளர் கிருஷ்ணகிரி இந்திய முத்திரைச் சட்டம் பிரிவு
 நான் 21/01/2018

2018 ஆண்டு ஆண்டு இரண்டாம் பாக் தேதி 12-ல் 124 குறையவாயிருந்த முத்திரைச் சட்டம் 124-ல்
 சார்பதிவாளர் அலுவலகத்தில் தாக்கல் செய்து எண் எண் 1 2018-ல் சார்பதிவாளர்

இது பொருள்



[Handwritten Signature]
 கிருஷ்ணகிரி விவாகம் ஆவண கையாண்டதில் உள்ளது

பதிவுச் சட்டம் பிரிவு கையாண்டு தேதி 12-ல் 124 குறையவாயிருந்த முத்திரைச் சட்டம் 124-ல் சார்பதிவாளர்
 இந்திய அலுவலகம், இந்த ஆவணம் எழுதித் தொகுப்பை எழுதித் நான் கையாண்டது மூலமாக

சார்பதிவாளர் 1 எண் இணை சார்பதிவாளர் கிருஷ்ணகிரி

எழுதி வாங்கியதாக ஒப்பக் கொண்டவர்
 இது பொருள்



[Handwritten Signature]
 கிருஷ்ணகிரி விவாகம் ஆவண கையாண்டதில் உள்ளது

இணையேற்று திருநித்தவர்கள்

[Handwritten Signatures]

திரு செங்கடசாமி த.பெ (செங்கடசாமி) அரியன் சட்டமூலம் வகை 12-ல்
 கிருஷ்ணகிரி, கிருஷ்ணகிரி, தமிழ்நாடு, இந்தியா கையாண்டு
 திரு அழகியன் த.பெ அன்புடன் 12-ல் அன்புடன் 12-ல் கிருஷ்ணகிரி, கிருஷ்ணகிரி,
 தமிழ்நாடு, இந்தியா கையாண்டு

Date: 27/01/2018 of Book 1
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 Department Office



தமிழ்நாடு அரசு
பதிவுத்துறை
ஒப்புக்கைச்சீட்டு

17/06/2018

பார்வைக்குறிப்பு விவரங்கள்

சார்பதிவாளர் அலுவலகப் பெயர்	I எண் இணை சார்பதிவாளர் கிருஷ்ணகிரி
விண்ணப்ப எண்	901LANDSV201800170497820
பரிவர்த்தனை எண்	REG2018006130498841
பரிவர்த்தனை நாள்	13/06/2018

விண்ணப்ப விவரங்கள்

விண்ணப்பதாரர் பெயர்	VUAYA
சேவை வகை	சார்பதிவாளர் அலுவலகத்தில் ஆவணப் பதிவு (பதிவுது)
முத்திரைத்தீர்வை (₹)	11400/-
பதிவுக் கட்டணம் (₹)	2000/-

தொகை செலுத்திய விவரங்கள்

வங்கியின் பெயர்	பாரத ஸ்டேட் வங்கி
வங்கிக்குறிப்பு எண்	IN00C004382
பணம் செலுத்திய விதம்	இணைய வரி
செலுத்தப்பட்ட தொகை (₹)	13400/-
தொகை செலுத்தும் நிலைப்பாடு	வெற்றி
தொகை செலுத்திய நாள்	13/06/2018

Document No. REG/2018 of Book 1
Contains 21 Sheets 01 Sheet
Registering Officer.

R/1 எண் இணை சார்பதிவாளர் கிருஷ்ணகிரி/புத்தகம்



மாண்புமிகு ஆண்டு துறை மாநகம் சா.நாள்

R/1 எண் இணை சார்பதிவாளர் கிருஷ்ணகிரி

R/1 எண் இணை சார்பதிவாளர் கிருஷ்ணகிரி/புத்தகம்-1/1745/2018 எண்ணைப் பதிவு செய்வது குறி

நாள் 2018
R/1 எண் இணை சார்பதிவாளர் கிருஷ்ணகிரி



S. Dhana
S.DHANASEKAR, M.Sc.(Geo)
Qualified Person

1745/2018 of Book 1
1745/2018 of Sheet
Registering Officer



THIRU C.KATHIRAVAN, I.A.S.,
CHAIRMAN/
DISTRICT COLLECTOR.

Krishnagiri District
Environment Impact
Assessment Authority,
Room No.30, Collectorate,
Krishnagiri.



ENVIRONMENTAL CLEARANCE

LE.No.34/DEIAA-KGI/EC No.25/2018 dated: 27.02.2018

To

Tmt.K.M.Vijaya,
W/o. Madhuzhagan,
No.58B Gandhi Nagar,
Krishnagiri Town and District

Sir,

Sub: DEIAA - Application for Environment Clearance for the Proposed Rough Stone quarrying over an extent of 4.00.0 Hects. in patta land S.F.No.78/1B(Part) Kothabetta village of Krishnagiri Taluk and District preferred by Tmt.K.M.Vijaya, W/o. Madhuzhagan, No.58B Gandhi Nagar, Krishnagiri Town and District - Issue of Environmental Clearance - Reg.

- Ref: 1. Thiru.K.M.Vijaya Application for Environment Clearance dated 02.01.2018.
2. Minutes of the DEAC meeting conducted on 02.02.2017
3. Minutes of the DEIAA meeting held on 23.02.2018

oOo-

Details of Minor mineral Activity:-

This has reference to your application first cited. The proposal is for obtaining Environmental Clearance for mining / quarrying of minor mineral rough stone based on the particulars furnished in your application as shown below:

1.	Name of Project Proponent and address	Tmt.K.M.Vijaya, W/o. Madhuzhagan, No.58B Gandhi Nagar, Krishnagiri Town and District
2.	Location of the Proposed Activity	
	Survey Number and Extent	78/1B(Part) Extent 4.00.0 hect
	Latitude and Longitude	12° 32' 38.89" N to 12° 32' 44.50" N 78° 13' 42.00" E to 78° 13' 52.82" E



Topo Sheet No.		57L/2
Village		Kothabertta
Taluk		Krishnagiri
District		Krishnagiri Distr
3. Proposed Activity		
i.	Minor mineral	Rough Stone
ii.	Mining Lease Area	4.00.0 Hects.
iii.	Approved quantity	10,80,884cbm of Rough Stone
iv.	Depth of Mining	71mts (25 Mts. above ground level and, 46 Mts above ground level) from a period of 5 years
v.	Type of mining	Open cast semi mechanized mining.
vi.	Category [B1/B2]	B2
vii.	Precise Area Communication	The District Collector Roc.No.419/2017/Mines dated:02.12.2017
viii.	Mining Plan approval	Mining Plan approved by the the Deputy Director of Geology of Mining Krishnagiri Lr.No.419/2017/Mines dated: 29.12.2017
ix.	Mining lease period	5 years
4. Whether Project area attracts any general conditions specified in the EIA notification, 2006 as amended:-		Not attracted Affidavit furnished
5. Man Power requirement per day.		18 Employees
6. Utilities		
i.	Source of Water	a. For Drinking and Domestic purpose water will be purchased from approved water vendors. b. For dust suppression and green belt development water from the existing bore hole situated near by the quarry area will be used.
ii.	Quantity of Water Requirement in KLD:	
	a. Domestic & Drinking	0.750 kilo litre
	b. Industrial	
	c. Green Belt & Dust Suppression	1.750 kilo litre
iii.	Power requirement	
	a. Domestic purpose	TNEB

	b.	Industrial purpose	Fuels is used in operating machinery and vehicles during the quarrying process and transportation and the fuel required for the entire project is 870546 Lts. of HSD.
7.		Cost	
	i.	Project Cost	Rs.30,30,000/-
	ii.	EMP Cost	Rs.3,70,000/-
8.		Public Consultation:-	Not required as per O.M. dated 24.12.2013 of MoEF, GOI
9.		Date of Appraisal by DEAC; Agenda No.	Agenda No.13 of 3 rd meeting of DEAC conducted on 02.02.2018
10.		Date of review / discussion by DEIAA and the Remarks:-	The proposal was placed before the DEIAA in its 3 rd meeting on 23.02.2018 as agenda No.13 and the authority after careful consideration, decided to grant Environmental Clearance to the said project of Mining of rough stone subject to terms and conditions stipulated under the provisions of Environment Impact Assessment Notification, 2006 as amended.
11.		Validity:	This Environmental Clearance is granted to Mining of Rough Stone for the production quantity of 870546 Cbm of rough stone for the period of five years from the date of execution of the mining lease period.
12.		NBWL Clearance:	The proposal area situated 26.16km away from The Cauvery Wild Life Sanctuary and it does not Attract NBWL clearance.
13.		Special Condition:	<ul style="list-style-type: none"> i. Ground Water Quality test should be conducted periodically. Water collected in the pit should be pumped via Settling Tank. ii. Adequate green belt should be maintained around the proposed area iii. Environment Management plan should be submitted before execution of lease deed.



Conditions to be Compiled before / during commencing operations:-

(1) The project proponent shall advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing the public that

- i) The project has been accorded Environmental Clearance.
- ii) Copies of clearance letters are available with the Tamil Nadu Pollution Control Board.

- iii) Environmental Clearance may also be seen on the website of the State Level Environment Impact Assessment Authority.
- iv) The advertisement should be made within 7 days from the date of receipt of the clearance letter and a copy of the same shall be forwarded to the SEIAA.



(2). The applicant has to obtain land use classification as industrial use before issue/renewal of mining lease.

(3). NOC from the Standing committee of the NBWL shall be obtained, if protected areas are located within 10 Km from the proposed project site.

(4). The project proponent shall comply the conditions laid down in the Section V, Rule 36 of Tamil Nadu Minor Minerals Concession Rules 1959.

(5). A copy of the Environment Clearance letter shall be sent by the proponent to the concerned Panchayat, Town Panchayat / Panchayat union/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the proponent and also kept at the site, for the general public to see.

(6). Quarry lease area should be demarcated on the ground with wire fencing to show the boundary of the lease area on all sides with red flags on every pillar shall be erected before commencement of quarrying.

(7). The proponent shall ensure that First Aid Box is available at site.

(8). The excavation activity shall not alter the natural drainage pattern of the area.

(9). The excavated pit shall be restored by the project proponent for useful purposes. **In this regard, the proponent shall deposit a sum of Rs.5,00,000/- (Rupees Five Lakhs only) in the name of District Collector Krishnagiri in the form of fixed deposit. The said fixed deposit will be refunded after restoration of pit after end of the lease period.**

(10). The proponent shall quarry and remove only in the permitted areas as per the approved Mining Plan details.

(11). The quarrying operation shall be restricted between 7 AM and 5 PM.

(12). The proponent shall take necessary measures to ensure that there shall not be any adverse impacts due to quarrying operation on the nearby human habitations, by way of pollution to the environment.

(13). A minimum distance of 15 mts. From any civil structure shall be kept from the periphery of any excavation area.

(14). Depth of quarrying shall be 2m above the ground water table /approved depth of mining whichever is lesser to be considered as a safeguard against Environmental Contamination and over exploitation of resources.

(15). The mined out pits should be backfilled where warranted and area should be suitably landscaped to prevent environmental degradation. The mine closure plan as furnished in the proposal shall be strictly followed including and tree plantation.

(16). Wet drilling method is to be adopted to control dust emissions. Delay detonators and shock tube initiation system for blasting shall be used so as to reduce vibration and dust.

(17). Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities.

(18). The explosives shall be stored at site as per the conditions stipulated in the permits issued by the licensing Authority.

(19). Blasting shall be carried out after announcing to the public adequate through public address system to avoid any accident.

(20). A study has to be conducted to assess the optimum blast parameters and blast design to keep the vibration limits less than prescribed levels and only such design and parameters should be implemented while blasting is done. Periodical monitoring of the vibration at specified location to be conducted and records kept for inspection.

(21). The Proponent shall take appropriate measures to ensure that the GLC shall comply with the revised NAAQ norms notified by MoEF, Govt of India 16.11.2002. [GLC = Ground Level Concentration], [NAAQ = Noise and Ambient Air Quality]

(22). The following measures are to be implemented to reduce Air Pollution during transportation of mineral

(i). Roads shall be graded to mitigate the dust emission.

(ii). Water shall be sprinkled at regular interval on the main road and other service roads to suppress dust.

(23). The following measures are to be implemented to reduce Noise Pollution

(i). Proper and regular maintenance of vehicles and other equipment.

(ii). Limiting time exposure of workers to excessive noise.

(iii). The workers employed shall be provided with protection equipment and earmuffs etc.

(iv). Speed of trucks entering or leaving the mine is to be limited to moderate speed of 25 kmph to prevent undue noise from empty trucks.

(24). Measures should be taken to comply with the provisions under Noise Pollution (Regulation and Control) (Amendment) Rules, 2010 issued by the MoE&F, Govt to control noise to the prescribed levels.

(25). Suitable conservation measures to augment groundwater resources in the area shall be planned and implemented in consultation with the Assistant Director, Ground Water Division, PWD, Dharmapuri.

(26) Rain water harvesting to collect and utilize the entire water falling in land area should be provided by construction of a storage tank with a capacity of 5,00,000 litres and the rain water harvested in the entire quarry area should be stored in it and used for the quarry purpose like dust prevention, wet drilling, providing water for green belt etc.

(27). Permission from the competent authority should be obtained for drawl of ground-water, if any, required for this project.

(28) Topsoil, if any, shall be stacked properly with proper slope with adequate measures and should be used for plantation purpose.

(29). The following measures are to be adopted to control erosion of dumps:-

- (i). Retention/ toe walls shall be provided at the foot of the dumps.
- (ii). Worked out slopes are to be stabilized by planting appropriate shrub/ grass species on the slopes.

(30). Waste oils, used oils generated from the EM machines, mining operations, if any, shall be disposed as per the Hazardous Wastes (Management, Handling, and trans boundary movement) Rules, 2008 and its amendments thereof to the recyclers authorized by TNPCB.

(31). Concealing the factual data or failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

(32). Rain water getting accumulated in the quarry floor shall not be discharged directly to the nearby stream or water body. If it is to be let into the nearby water body, it has to be discharged into a silt trap on the surface within the lease area and only the overflow after allowing setting of soil be let into the nearby waterways. The silt trap should be of sufficient dimensions to catch all the silt water being pumped out during one season. The silt trap should be cleaned of all the deposited silt at the end of the season and kept ready for taking care of the silt in the next season. **Photographs of the silt trap should be furnished before commencing quarry operation.**

(33). The lease holder shall undertake adequate safeguard measures during extraction of material and ensure that due to this activity, the hydro-geological regime of the surrounding area shall not be affected. Regular monitoring of ground water level and quality shall be carried out around the mine lease area during the



mining operation. If at any stage, that the ground water is getting affected due to the quarrying activity, necessary corrective measures shall be taken out. The Assistant Director Ground water Division, PWD Bangalore shall monitor.



(34). No tree-felling shall be done in the leased area, except with the permission from competent Authority.

(35). To take up environmental monitoring of the proposed quarry site before, during and after the mining activities including vibration, surface water, air & flora/fauna environment, slurry water generated/disposed and method of disposal, involving a reputed academic institution and it should be monitored by the District Environmental Engineer, TNPCB, Hosur on yearly basis.

(36). It shall be ensured that the total extent of nearby quarries (existing, abandoned and proposed) located within 500 meter radius from the periphery of this quarry is not exceeding 25 hectares within the mining lease period of this application.

(37). It shall be ensured that there is no habitation is located within 500 meter radius from the periphery of the quarry site and also ensure that no hindrance will be caused to the people of the habitation located within 500m radius from the periphery of the quarry site.

(38). Ground water quality monitoring should be conducted once in 3 Months.

(39). Transportation of the quarried materials shall not cause any hindrance to the Village people/Existing Village road.

(40). Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEP, GOI once in three months.

(41). Air sampling at intersection point should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEP, GOI periodically once in six months.

(42). Bunds should be provided at the boundary of the project site and it should be properly maintained.

(43). The project proponent shall undertake plantation/ afforestation work by planting the native species on all side of the lease area at the rate of 400/Ha. Suitable tall tree saplings should be planted on the bunds and other suitable areas in and around the work place.

(44). At least 10 Neem trees should be planted around the boundary of the quarry site.

(45). Floor of excavated pit to be leveled and sides to be sloped with 1:1 slope (Except for granite quarries) in the mine closure phase.



(46). The Project Proponent shall ensure a minimum turnover will be utilized for the CSR Activity.

(47). The Project Proponent shall provide solar lights in villages.

(48). The Project Proponent shall comply with the mining and other relevant rules and regulations where ever applicable.

(49). Rainwater shall be pumped out Via Settling Tank only

(50). Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary shall be developed and maintained.

(51). As per MoEF & CC, Govt. Office Memorandum dated 30.03.2015, prior clearance from Forestry & Wild Life angle including clearance from obtaining committee of the National Board for Wild life as applicable shall be obtained before starting the quarrying operation, if the project site is located within 10KM from National Park and Sanctuaries.

(52). The quarrying activity shall be stopped if the entire quantity indicated in the Mining plan is quarried even before the expiry of the quarry lease period and the same shall be monitored by the District Authorities.

(53) Safety equipments to be provided to all the employees.

(54) Safety distance of 50 m has to be provided in case of railway, reservoir, canal/odai.

(55) The Assistant / Deputy Director Department of Geology and Mining shall ensure that the proponent has engaged the blaster with valid Blasting license / certificate obtained from the competent authority before execution of mining lease.

(56) The proponent shall furnish the Baseline data covering the Air, Water, Noise and land environment quality for the proposed quarry site before execution of mining lease.

(57) The proponent shall erect the pillars in accordance with the Rules for depicting GPS details in the earmarked boundary of the quarry site to monitor electronically before execution of mining.

(58) The proponent shall furnish the data obtained from the Public Works Department regarding the details of ground water table in the quarry site.

(59) The proponent has to provide insurance protection to the workers in the case of existing mining or provide the affidavit in case of fresh lease before execution of mining lease.

(60) The proponent has to display the name board showing the details of proponent, leased period, extent of existing activity before execution of mining.



(61) Heavy earth machinery equipments if utilized, from the competent authority.

(62) The environmental norms shall be monitored by the District Environmental Engineer, Tamil Nadu Pollution Control Board, Hosur.

(63) The Assistant Director Public Works Department, Ground Water Division Dharmapuri shall monitor whether the quarrying activity is carried out above the ground water level on yearly basis.

(64) NOC for sanitary certificate shall be obtained from the Deputy Director of Health Services, Krishnagiri.

(65) Yearly medical examination of the quarry workers should be carried out by a registered medical practitioner and the report should be filed in the quarry office in a separate file and copy should be sent to the Deputy Director, Health Services, Krishnagiri.

(66) Closed circuit camera should be erected at the quarry site and the passage of vehicles in and out of the quarry should be recorded and the footage of the recordings of the camera should be maintained and should be produced before the enforcing officials when ever called for.

(67) Vehicles used for transportation of quarried materials should be fitted with GPS and monitored.

(68) Pit Mouth register should be maintained in online

(69) Auditor report on the annual turnover amount should be submitted to the District Collector within one month from the end of the financial year.

(70) 02.5% of the turn over amount should be utilized for the CSR activity after consultation with the District Collector.

B. General Conditions:

(1) EC is given only on the factual records, documents and the commitments furnished in non judicial stamp paper by the proponent.

(2) The Proponent shall obtain the Consent for Establishment from the TNPC Board before commencing the activity.

(3) No change in mining technology and scope of working should be made without prior approval of the SEIAA, Tamil Nadu.

(4) No change in the calendar plan including excavation, quantum of mineral (minor mineral) should be made.



- (5) Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and high levels of particulate matter such as loading and unloading points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- (6) Effective safeguards shall be adopted against health risks on account of breeding of vectors in the water bodies created due to excavation of earth.
- (7) A berm shall be left from the boundary of adjoining field having a width equal to at least half the depth of proposed excavation.
- (8) Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
- (9) Vehicular emissions shall be kept under control and be regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying them mineral shall not be overloaded.
- (10) Access and haul roads to the quarrying area should be restored in a mutually agreeable manner where these are considered unnecessary after extraction has been completed.
- (11) All Personnel shall be provided with protective respiratory devices including safety shoes, Masks, gloves etc. Supervisory people should be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
- (12) Periodical medical examination of the workers engaged at the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly. The workers shall be provided with personnel protective measures such as masks, gloves, boots etc.
- (13) Workers/labourers shall be provided with facilities for drinking water and sanitation facility for Female and Male separately.
- (14) The project proponent shall ensure that shift labour is not employed in the project as per the sworn affidavit furnished.
- (15) The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its regional office located at Chennai.



- (16) The Environmental Clearance does not absolve the project/proponent of his obligation/requirement to obtain other statutory and administrative clearances from other statutory and administrative authorities.
- (17) This Environmental Clearance does not imply that other administrative clearances shall be granted to the project by the concerned authorities. Such authorities would be considering the project on merits and be taking decisions independently of the Environmental Clearance.
- (18) The DEIAA, Krishnagiri may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.
- (19) The DEIAA, Krishnagiri may cancel the environmental clearance granted to this project under the provisions of EIA Notification, 2006, at any stage of the validity of this environmental clearance, if it is found or if it comes to the knowledge of this DEIAA, Krishnagiri that the project proponent has deliberately concealed and/or submitted false or misleading information or inadequate data for obtaining the environmental clearance.
- (20) Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.
- (21) The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability Insurance Act, 1991, along with their amendments, the Minor Mineral Conservation & Development Rules, 2010 framed under MMR Act 1957, National Commission for protection of Child Right Rules, 2005 and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/Hon'ble High Court of Madras and any other Courts of Law relating to the subject matter.
- (22) Any other conditions stipulated by other Statutory/Governmental authorities shall be complied.
- (23) Any appeal against this environmental Clearance shall lie with the Hon'ble National Green Tribunal, if preferred within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act 2010.

By Order
**CHAIRMAN DEIAA-KGI/
 DISTRICT COLLECTOR,
 KRISHNAGIRI.**

// True Copy // By Order //

For **CHAIRMAN DEIAA-KGI/
 DISTRICT COLLECTOR,
 KRISHNAGIRI.**

Copy to

- 1. The Secretary, Ministry of Mines, Government of India, Shilpi Bhawan, New Delhi

2. The Principal Secretary, Environment and Forest Department, Government of Tamil Nadu, Tamil Nadu.
3. The Principal Secretary to Government, Industries Department, Government of Tamil Nadu, Tamil Nadu.
4. The Additional Principal Chief Conservator of Forests, Regional Office (SZ), 34, HEPC Building 1st & 2nd Floor, Cathedral Garden Road, Nungambakkam, Chennai-34.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex East Arjun Nagar, New Delhi 110 032.
6. The Member Secretary, State Level Environmental Impact Assessment Authority Tamil Nadu Panagal Building Saidapet, Chennai
7. The Chairman Tamil Nadu Pollution Control Board, 75, Mount Saldai (Guindy), Chennai-32)
8. The Commissioner of Geology and Mining, Guindy, Chennai-32
9. E1 Division, Ministry of Environment and Forests Parivaran Bhawan, New Delhi.
10. File No.02/ DEIAA/KGI/2017.




S. DHANASEKAR, M.Sc., (Geo)
Qualified Person



Annexure - IV

TAMILNADU POLLUTION CONTROL BOARD



CONSENT ORDER NO. 1805213894695

DATED: 20/06/2018

PROCEEDINGS NO.F.1682HSR/RS/DEE/TNPCB/HSR/A/2018

DATED: 20/06/2018

SUB: Tamil Nadu Pollution Control Board –CONSENT TO OPERATE –DIRECT –M/s. K.M. VIJAYA ROUGH STONE QUARRY , S.F.No. 78/1B pt, KOTTAPETA village Krishnagiri Taluk and Krishnagiri District - Consent for operation of the plant and discharge of emissions under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) –Issued- Reg.

- Ref:**
1. Unit's Online Application No. 13894695 dated 01.06.2018
 2. IR.No : F.1682HSR/RS/AE/HSR/2018 dated 18/06/2018
 3. Minutes of the 161th DLCCC meeting held on 19.06.2018 vide item no. HSR 161-09

CONSENT TO OPERATE is hereby granted under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) (hereinafter referred to as "The Act") and the rules and orders made there under to

The Proprietor,
 M/s. K.M. VIJAYA ROUGH STONE QUARRY
 S.F.No.78/1B pt,
 KOTTAPETA Village,
 Krishnagiri Taluk,
 Krishnagiri District.

Authorizing the occupier to operate the industrial plant in the Air Pollution Control Area as notified by the Government and to make discharge of emission from the stacks/chimneys.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This CONSENT is valid for the period ending March 31, 2022.

S. PALANISAMY Digitally signed by S. PALANISAMY

DN: cn=2018.06.21 22:05:13 +05'30'

District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR

To
 The Proprietor,
 M/s.K.M. VIJAYA ROUGH STONE QUARRY ,
 SF.No.78/1B pt, Kothubetta Village, Krishnagiri Taluk & Krishnagiri District ,
 Pin: 635001

Copy to:

- 1.The Commissioner, KRISHNAGIRI-Panchayat Union, Krishnagiri Taluk, Krishnagiri District .
2. Copy submitted to the Member Secretary, Tamil Nadu Pollution Control Board, Chennai for favour of kind information.
3. Copy submitted to the JCEE-Monitoring, Tamil Nadu Pollution Control Board, Vellore for favour of kind information.
4. File



STANDARD OIL CORPORATION



SPECIAL CONDITIONS

- This consent to operate is valid for operating the facility for the manufacture of products (Col. 2) at the rate (Col. 3) mentioned below. Any change in the products and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl. No.	Description	Quantity	Unit
Product Details			
1.	Rough Stone quarrying in an extent of 4.00 hectare, Located at SF.No.78/1B pt, Kothabetta Village, Krishnagiri Taluk & Krishnagiri District	1080884	Cubic Meter/Five Year

- This consent to operate is valid for operating the facility with the below mentioned emission/noise sources along with the control measures and/or stack. Any change in the emission source/control measures/change in stack height has to be brought to the notice of the Board and fresh consent/Amendment has to be obtained.

I Point source emission with stack :				
Stack No.	Point Emission Source	Air pollution Control measures	Stack height from Ground Level in m	Gaseous Discharge in Nm ³ /hr
II Fugitive/Noise emission :				
Sl. No.	Fugitive or Noise Emission sources	Type of emission	Control measures	
1.	Vehicle Movement	Fugitive	Water Sprinkling System	
2.	Drilling	Fugitive	Water Sprinkling System	

- The emission shall not contain constituents in excess of the tolerance limits as laid down hereunder :

Sl.	Parameter	Unit	Tolerance limits	Stacks
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Annexure enclosed if applicable. :-

- The Ambient Air in the industrial plant area shall not contain constituents in excess of the tolerance limits prescribed below.

Sl. No.	Pollutant	Time Weighted Average	Unit	Tolerance Limits	
				Industrial, Residential, Rural and other area	Ecologically Sensitive Area (notified by Central Govt.)
1.	Sulphur Dioxide (SO ₂)	Annual 24 hours	microgram/m ³ microgram/m ³	50 80	20 80
2.	Nitrogen Dioxide (NO ₂)	Annual 24 hours	microgram/m ³ microgram/m ³	40 80	30 80
3.	Particulate Matter (Size Less than 10 micro M) or PM ₁₀	Annual 24 hours	microgram/m ³ microgram/m ³	60 100	60 100
4.	Particulate Matter (Size Less than 2.5 micro M) or PM _{2.5}	Annual 24 hours	microgram/m ³ microgram/m ³	40 60	40 60
5.	Ozone (O ₃)	Annual 24 hours	8 Hours 1 Hour	100 180	100 180

POLLUTION PREVENTION PAYS



TAMIL NADU POLLUTION CONTROL BOARD

Sl. No.	Pollutant	Time Weighted Average	Unit	Tolerance Limits	
				Industrial, Residential, Rural and other area	Ecologically Sensitive Area (notified by Central Govt.)
6.	Lead (Pb)	Annual 24 hours	microgram/m ³	0.5	0.5
			microgram/m ³	1.0	1.0
7.	Carbon Monoxide (CO)	8 Hours	miligram/m ³	02	02
		1 Hour	miligram/m ³	04	04
8.	Ammonia (NH ₃)	Annual 24 hours	microgram/m ³	100	100
			microgram/m ³	400	400
9.	Benzene (C ₆ H ₆)	Annual	microgram/m ³	5	5
10.	Benzo(O) Pyrene (BaP) -particulate phase only	Annual	nanogram/m ³	01	01
11.	Arsenic (As)	Annual	nanogram/m ³	06	06
12.	Nickel (Ni)	Annual	nanogram/m ³	20	20

3(c) The Ambient Noise Level in the industrial plant area shall not exceed the limits prescribed below:

Limits in L.eq.-dB(A)	Day Time	Night Time
Residential Area	55	45

- All units of the Air pollution control measures shall be operated efficiently and continuously so as to achieve the standards prescribed in Sl.No.3 above.
- The occupier shall not change or alter quality or quantity or the rate of emission or replace or alter the air pollution control equipment or change the raw material or manufacturing process resulting in change in quality and/or quantity of emissions without the previous written permission of the Board.
- The occupier shall maintain log book regarding the stack monitoring system or operation of the plant or any other particulars for each of the unit operations of air pollution control systems to reflect the working condition which shall be furnished for verification of the Board officials during inspection.
- The occupier shall at his own cost get the samples of emission/air/noise levels collected and analyzed by the TNPC Board Laboratory once in every 6 months/once in a year/periodically for the parameters as prescribed.
- Any upset condition in any of the plants of the factory which is likely to result in increased emissions and result in violation of the standards mentioned in Sl.No.3 shall be reported to the Member Secretary / Joint Chief Environmental Engineer-Monitoring and the concerned District/Assistant Environmental Engineer of the Board by e-mail immediately and subsequently by Post with full details of such upset condition.
- The occupier shall always comply and carryout the order/directions issued by the Board in this Consent Order and from time to time without any negligence. The occupier shall be liable for action as per provisions of the Act in case of non compliance of any order/directions issued.

Additional Conditions:

- The unit shall operate and maintain the Air Pollution Control measures efficiently so as to achieve the Ambient Air Quality emission / Ambient Noise level standards prescribed by the Board.
- The unit shall comply with the provisions as laid down in the Tamil Nadu Prevention of illegal mining, transportation and storage of mineral and mineral dealers Rules, 2011.
- The unit shall comply with the conditions stipulated in the Environmental Clearance accorded to the unit by the DEIAA vide Lr.No.34/DEIAA-KGI/EC No.26/2018 dated 27.02.2018.
- In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification. Failing to remit the consent fee, this consent order will be withdrawn without any notice and further action will be initiated against the unit as per law



TAMILNADU POLLUTION CONTROL BOARD



S. PALANISAMY

District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR



தமிழ்நாடு மாநிலத் துறைமுகக் கட்டுப்பாட்டுத் துறை

GENERAL CONDITIONS

1. The occupier shall make an application along with the prescribed consent fee for grant of renewal of consent at least 60 days before the date of expiry of this Consent Order along with all the required particulars ensuring that there is no change in production quantity and emission.
2. This Consent is given by the Board in consideration of the particulars given in the application. Any change or alteration or deviation made in actual practice from the particulars furnished, in the application will also be ground for review/variation/revocation of the Consent Order under Section 21 of the Act.
3. The conditions imposed shall continue in force until revoked under Section 21 of the Act.
4. After the issue of this order, all the 'Consent to Operate' orders issued previously under Air (Prevention and Control of Pollution) Act, 1981 as amended stands defunct.
5. The occupier shall maintain an Inspection Register in the factory so that the inspecting officer shall record the details of the observations and instructions issued to the unit at the time of inspection for adherence.
6. The occupier shall provide and maintain an alternate power supply along with separate energy meter for the Air Pollution Control measures sufficient to ensure continuous operation of all pollution control equipments to ensure compliance.
7. The occupier shall provide all facilities to the Board officials for collection of samples in and around the factory at any time.
8. The applicant shall display the flow diagram of the sources of emission and pollution control systems provided at the site.
9. The liquid effluent arising out of the operation of the air pollution control equipment shall also be treated in a manner and to the satisfaction of standards prescribed by the Board in accordance with the provisions of Water (Prevention and Control of Pollution) Act, 1974 as amended.
10. The air pollution control equipments, location of inspection chambers and sampling port holes shall be made easily accessible at all time.
11. In case of any episodal discharge of emission, the industry shall take immediate action to bring down the emission within the limits prescribed by the Board.
12. If applicable, the occupier has to comply with the provisions of Public Liability Insurance Act, 1991 to provide immediate relief in the event of any hazard to human beings, other living creatures/plants and properties while handling and storage of hazardous substances.
13. The issuance of this consent does not authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any natural watercourse or in Government Poramboke lands.
14. The issuance of this Consent does not convey any property right in either real personal property or any exclusive privileges, nor does it authorize any injury to private property or Government property or any invasion of personal rights nor any infringement of Central, State laws or regulation.
15. The occupier shall forth with keep the Board informed of any accident of unforeseen act or event of any poisonous, noxious or polluting matter or emissions are being discharged into stream or well or air as a result of such discharge, water or air is being polluted.
16. If due to any technological improvements or otherwise the Board is of opinion that all or any of the conditions referred to above requires variation (including the change of any treatment system, either in whole or in part) the Board shall, after giving the applicant an opportunity of being heard, vary all or any of such conditions and thereupon the applicant shall be bound to comply with the conditions as so varied.
17. In case there is any change in the constitution of the management, the occupier of the new management shall file fresh application under Air (Prevention and Control of Pollution) Act, 1981, as amended in Form-I alongwith relevant documents of change of management immediately and get the necessary amendment with renewal of consent order.
18. In case there is any change in the name of the company alone, the occupier shall inform the same with relevant documents immediately and get the necessary amendments for the change of name from the Board.



TAMILNADU POLLUTION CONTROL BOARD



19. The occupier shall display this consent order granted to him in a prominent place for perusal of the inspecting Officers of this Board.

S. PALANISAMY Digital signed by S. PALANISAMY
Date: 2023.01.27 22:02:25 +0530'

District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR



THE ENVIRONMENTAL PROTECTION AGENCY

POLLUTION PREVENTION PAYS



RENEWAL OF CONSENT ORDER NO:2209246836543
DATE:22/08/2022

PROCEEDINGS NO.F.1682HSR/RS/DEE/TNPCB/HSR/A/2022 DATED: 22/08/2022

Sub :	Tamil Nadu Pollution Control Board – AUTO RENEWAL OF CONSENT –M/s. K.M. VIJAYA ROUGH STONE QUARRY , S.F. No. 78/IB pt, KOTTAPETA village, Krishnagiri Taluk and Krishnagiri District- Renewal of Consent for operation of the plant and discharge of emissions under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) – Issued – Reg.
Ref :	1.CTO's Proc.No.F.1682HSR/RS/DEE/TNPCB/HSR/A/2018. Dated: 20/06/2018 2.Unit's OCMMS application No. 46836543 for Auto renewal, Dated.15.07.2022

Renewal of Consent is hereby granted under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) (hereinafter referred to as "The Act") and the rules and orders made there under to

The Proprietor,
M/s. K.M. VIJAYA ROUGH STONE QUARRY
S.F No. 78/IB pt,
KOTTAPETA Village,
Krishnagiri Taluk,
Krishnagiri District.

Authorizing the occupier to operate the industrial plant in the Air Pollution Control Area as notified by the Government and to make discharge of emission from the stacks/chimneys.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This RENEWAL OF CONSENT is valid for the period ending - May 28, 2023

R
VENKATESAN
Digitally signed by R
VENKATESAN
Date: 2022.08.26
17:47:42 +05'30'
District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR

SPECIAL CONDITIONS

1. This renewal of consent is valid for operating the facility for the manufacture of products (Col. 2) at the rate (Col. 3) mentioned below. Any change in the products and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl.No.	Description	Quantity	Unit
Product Details :-			
1.	Rough Stone quarrying in an extent of 4.00 hectare, Located at SF No.78/1B pt, Kothabetta Village, Krishnagiri Taluk & Krishnagiri District	1080884	Cubic Meter/Five Year
By-Product Details :-			
Intermediate Product Details :-			

2. This renewal of consent is valid for operating the facility with the below mentioned emission/noise sources along with the control measures and/or stack. Any change in the emission source/control measures/change in stack height has to be brought to the notice of the Board and fresh consent/Amendment has to be obtained

I Point source emission with stack :				
Stack No	Point Emission sources	Air pollution Control measures provided	Stack height from Ground Level in m	Gaseous Discharge in Nm ³ /hr
II Fugitive/Noise emission :				
Sl.No.	Fugitive or Noise Emission sources	Type of Emission	Control measures provided	Quantity
1.	Vehicle Movement	Fugitive	Water Sprinkling System	
2.	Drilling	Fugitive	Water Sprinkling System	

Special Additional Conditions-

i. The unit shall install the approved retrofit emission control device/equipment with at least 70% Particulate matter reduction efficiency on all DG sets with capacity of 125 KVA and above or otherwise the unit shall be shift to gas based generators within the time frame prescribed in the notification No.

TNPCB/Labs/DD(L)/2151/2019 dated 10.06.2020 issued by TNPCB.

ii. The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board /National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional Conditions-

Special Additional Conditions:

i. The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board/National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional conditions:

1. The unit shall carryout the quarrying activity only with the quarry lease agreement made with the District collector, Krishnagiri.
2. The unit shall comply all the conditions prescribed in the Environmental Clearance issued vide Lr No. 34/DEIAA-KGI/EC.No.26/2018 Dated 27/02/2018.
3. The unit shall comply with the conditions imposed in the Mining Lease Agreement entered with the District Collector, Krishnagiri dated on 30/05/2018.
4. The unit shall operate and maintain the APC measures in the form of portable water sprinklers effectively and continuously so as to satisfy the NAAQ / Emission standards prescribed by the Board.
5. The unit shall adhere to the ANL standards as prescribed by the Board.
6. The unit shall continue to develop more green belt with trees having thick canopy cover in the unit's premises.
7. The unit's operation/ activity for the mining shall not disturb the nearby agricultural land if any at any circumstances.
8. The unit shall take necessary precautionary measures to prevent any adverse impact on the nearby habitation.

9.The consent issued is subject to the final outcome of National Green Tribunal (South Zone) in application No. 166/2013.

10.In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification, failing which this order will be withdrawn without any notice and further action will be initiated against the unit as per law.

Digitally signed by R
VENKATESAN
Date: 2022.01.28 10:48:07
+05'30'

**District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR**



To
The Proprietor,
M/s.K.M. VIJAYA ROUGH STONE QUARRY,
No.58, Gandhi Nagar, Krishnagiri
Town & Krishnagiri District ,635001,
Pin: 635001.

Copy to:

- 1.The Commissioner, KRISHNAGIRI-Panchayat Union, Krishnagiri Taluk, Krishnagiri District .
2. Copy submitted to the Member Secretary, Tamil Nadu Pollution Control Board, Chennai for favour of kind information.
3. Copy submitted to the JCEE-Monitoring, Tamil Nadu Pollution Control Board, Vellore for favour of kind information.
4. File

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RENEWAL OF CONSENT ORDER NO:2209146836543
DATE:22/08/2022

PROCEEDINGS NO.F.1682HSR/RS/DEE/TNPCB/HSR/W/2022 DATED: 22/08/2022

Sub :	Tamil Nadu Pollution Control Board – AUTO RENEWAL OF CONSENT – M/s. K.M. VIJAYA ROUGH STONE QUARRY S.F No. 78/1B pt, KOTTAPETA Village, Krishnagiri Taluk, Krishnagiri District- Renewal of Consent for the operation of the plant and discharge of sewage and/or trade effluent under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act 6 of 1974) – Issued- Reg.
Ref :	1.CTO's Proc.No.F.1682HSR/RS/DEE/TNPCB/HSR/W/2018, Dated: 20/06/2018 2.Unit's OCMMS application No. 46836543 for Auto renewal, Dated.15.07.2022

Renewal Of Consent is hereby granted under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act, 6 of 1974) (hereinafter referred to as "The Act") and the rules and orders made there under to

The Proprietor,
M/s . K.M. VIJAYA ROUGH STONE QUARRY
S.F No. 78/1B pt,
KOTTAPETA Village,
Krishnagiri Taluk,
Krishnagiri District.

Authorising the occupier to make discharge of sewage and /or trade effluent.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This RENEWAL OF CONSENT is valid for the period ending - May 28, 2023

R
VENKATESAN
Digitally signed by R
VENKATESAN
Date: 2022.08.26
17:46:58 +05'30'
District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR

SPECIAL CONDITIONS

1. This renewal of consent is valid for operating the facility for the manufacture of products (Col. 2) at the rate (Col. 3) mentioned below. Any change in the products and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl.No.	Description	Quantity	Unit
a.	Product Details :-		
1.	Rough Stone quarrying in an extent of 4.00 hectare, Located at SF No.78/1B pt, Kothabetta Village, Krishnagiri Taluk & Krishnagiri District	1080884	Cubic Meter/Five Year
b.	By-Product Details :-		
c.	Intermediate Product Details :-		

2. This renewal of consent is valid for operating the facility with the below mentioned permitted outlets for the discharge of sewage/trade effluent. Any change in the outlets and the quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Outlet No.	Description of Outlet	Maximum daily discharge in KLD	Point of disposal
EFFLUENT TYPE :-		Effluent Type : Sewage	
1.	Sewage	0.67	On Industrys own land
EFFLUENT TYPE :-		Effluent Type : Trade Effluent	
OUTLET NUMBER	DESCRIPTION OF OUTLET	MAXIMUM DAILY DISCHARGE (IN KLD)	POINT OF DISPOSAL

Special Additional Conditions-

The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board /National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional Conditions-

Special Additional Conditions:

1.The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board /National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional conditions:

- 1.The unit shall carryout the quarrying activity only with the quarry lease agreement made with the District collector, Krishnagiri.
- 2.The unit shall comply all the conditions prescribed in the Environmental Clearance issued vide Lr No. 34/DEIAA-KGI/EC.No.26/2018 Dated 27/02/2018.
- 3.The unit shall comply with the conditions imposed in the Mining Lease Agreement entered with the District Collector, Krishnagiri dated on 30/05/2018.
- 4.The unit shall treat and dispose the sewage generated from the unit through Septic tank and Soak pit arrangement.
- 5.The unit shall ensure that no trade effluent is generated at any stage of its manufacturing process.
- 6.The unit's operation/ activity for the mining shall not disturb the nearby agricultural land if any at any circumstances.
- 7.The unit shall take necessary precautionary measures to prevent any adverse impact on the nearby habitation.
- 8.The consent issued is subject to the final outcome of National Green Tribunal (South Zone) in application No. 165/2013.
- 9.In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification, failing which this order will be withdrawn without any notice and further action will be initiated against the unit as per law.
- 10.The unit shall not use 'Use and throwaway plastics' such as plastic sheets used for food wrapping, spreading on dining table etc, plastic plates, plastic coated tea cups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastics flags irrespective of thickness, within the industry premises. Instead unit shall encourage use of eco friendly alternative such as banana leaf, arecanut palm plate, stainless steel, glass,

porcelain plates/cups, cloth bag, jute bag etc.,

11. In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification, failing which this order will be withdrawn without any notice and further action will be initiated against the unit as per law.

R
VENKATESAN

Digitally signed by R
VENKATESAN
Date: 2022.08.26
17:49:28 +05'30'

District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR



To

The Proprietor,
M/s.K.M. VIJAYA ROUGH STONE QUARRY,
No.58, Ghandhi Nagar, Krishnagiri
Tqwn & Krishnagiri District ,635001,
Pin: 635001

Copy to:

1. The Commissioner, KRISHNAGIRI-Panchayat Union, Krishnagiri Taluk, Krishnagiri District .
2. Copy submitted to the Member Secretary, Tamil Nadu Pollution Control Board, Chennai for favour of kind information.
3. Copy submitted to the JCEE-Monitoring, Tamil Nadu Pollution Control Board, Vellore for favour of kind information.
4. File

This is computer generated. Signature is not required.


S.DHANASEKAR, M.Sc., (Geo)
Qualified Person

அளவைப்படிவு எண் 23

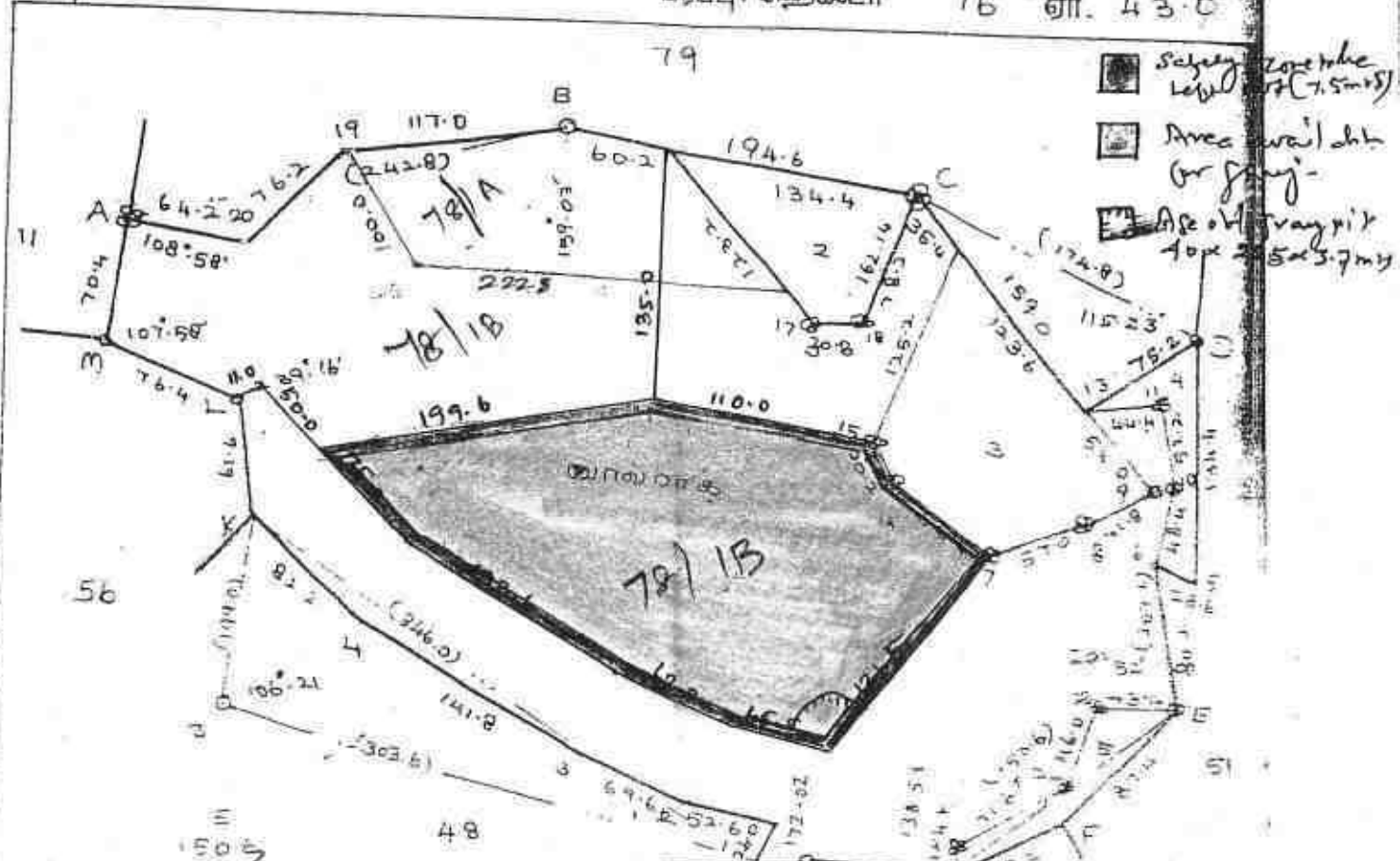


சி. தர்மபுரி

வட்டம். கிருஷ்ணகிரி

புல எண். 78

பரப்பு: ஹெக்டேர் 16 ஏர். 43.0



- Survey zone take level (7.5mrs)
- Area wall etc for gang
- Area of trap pit for 25x3.7m

LESSEE

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 Contains 15 Sheets 15 Sheet

[Signature]
 Registering Officer.

[Signature]
 COLLECTOR
 KRISHNAGIRI



Village Administrator Officer
 72, KOTHA PETTA,
 KRISHNAGIRI TK. & DT.

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 கிருஷ்ணகிரி

கிராம நிர்வாக அலுவலர்
 கிருஷ்ணகிரி

அளவை. NOT to scale

[Signature]
 S.DHANASEKAR, M.Sc. (Geo)
 Qualified Person



தமிழக அரசு

வருவாய்த் துறை

நில உரிமை விபரங்கள் : இ. எண் 10(1) பிரிவு

மாவட்டம் : கிருஷ்ணகிரி

வட்டம் : கிருஷ்ணகிரி

வருவாய் கிராமம் : கொத்தபேட்டா

பட்டா எண் : 1521



உரிமையாளர்கள் பெயர்

1. D மதியழகன்

மனைவி

K M விஜயா

நன்செய்

புன்செய்

மற்றவை

பரப்பு

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குறிப்பு 2 :



1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <http://eservices.tn.gov.in> என்ற இணைய தளத்தில் 31/05/072/01521/20269 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.

2. இத் தகவல்கள் 24-07-2017 அன்று 11:22:40 AM நேரத்தில் அச்சடிக்கப்பட்டது.

3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்



1827

- ஆம் பசலியில் கிருஷ்ணகிரி

மாவட்டம் கிருஷ்ணகிரி

கிராமக் கணக்கு வட்டம் 72-கொத்தப்பேட்டை

எண் 2 கிராமத்தில் வருடவாரி புலவாரி கைப்பற்று சாகுபடி அடங்கல் கணக்கு



தில வாரித் திட்டத்தின்படி புலன்களின் விபரம்.					சாகுபடி யாளரின் பெயர்.	முதல் போகம்.						
(1) தில அளவை எண்.	(2) உட்பிரிவு எண்.	(3) பரப்பு.	(4) தீர்வை.	(5) ஒரு போகம் அல்லது இரு போகம்.		(6) 1521	(7) நிலத்தின் எந்த பகுதி யாவது சாகுபடியாளரால் பயிரிடப்பட்டுள்ளதா.	(8) எந்த மாதத்தில் பயிர் செய்யப்பட்டது எந்த மாதத்தில் அறுவடை செய்யப்பட்டது.	(9) பயிரின் பெயர்.	(10) பயிராளர் / அறுவடையாளர் பரப்பு.	(11) உண்மையான பாபச்சல் ஆதாரம்.	(12) விளைச்சல் அளவு விழுக்காடு.
78	1B	1.92 ⁰ 16.45			K. M. 275571							

2025/02/25
 Village Administrative Officer
 72, KOTHA PETTA,
 KRISHNAGIRI TK. & DT.

இரண்டாம் போகம்.																
(13) எந்த மாதத்தில் பயிர் செய்யப்பட்டது எந்த மாதத்தில் அறுவடை செய்யப்பட்டது.	(14) பயிரின் பெயர்.	(15) பயிராளர் / அறுவடையாளர் பரப்பு.	(16) உண்மையான பாபச்சல் ஆதாரம்.	(17) விளைச்சல் அளவு விழுக்காடு.	கிராம ஆலுவாரின் குறிப்புகள் :- (1) புலன்களின் பகுதிகளில் மட்டும் பயிரிடப்பட்ட இடங்களில் விவசாயிகள் அல்லது கைப்பற்றில் இல்லாத நிலங்களின் சாகுபடியின் பரப்பு தன்மையும் முந்தைய மாதத்தில் பாபச்சல் உதவிவின்றி பயிரிடப்பட்டவை என்று பதிவாகியுள்ள நிலம் - கருக்கு பிந்தைய மாதங்களில் நீர் பாபச்சல்பட்ட விவரங்கள்.											
					(18அ)	கீழ்க்கண்டவகையில் பயிரிடப்பட்டது உள்ள நிலத்தின் தன்மை மற்றும் பரப்பின் விவரங்கள் கீழ்க்கண்ட தரிகை அளவை எண் அல்லது அடங்கல் பகுதியில். (அ) வளம், (ஆ) பயன்ற பயிர் செய்ய இயலாத நிலம், (இ) விவசாயம் அல்லாத இதர காரியங்களுக்கு பயன் படுத்தப்படும் நிலம், (ஈ) பயிரிடத்தக்க தரிகை நிலையான புல் தரைகளும் மற்றும் இதர மேய்ச்சல் நிலங்களும், (ஊ) விதைக்கப்பட்ட திகர பரப்பில் சேர்க்கப்படாத மரவகைப் பயிர்களும் தோப்புகளும், (எ) நடப்புத் தரிகைகள் (ஏ) இதர தரிகை நிலங்கள்.										

பயிர் பார்வையிடும் ஆலுவாரர் குறிப்புகள்.

419/10/17 JAN 2023



தமிழ்நாடு தமில்நாடு TAMILNADU

5799
14.3.17K. M. விஜயா
சண்மன.B 665149
V. RADHA,
S.V.L. No 3936/B1/2000
KRISHNAGIRI**கிரய ஆவணம்**

15.03.2017-ம் தேதியில் கிருஷ்ணகிரி மாவட்டம், கிருஷ்ணகிரி வட்டம், கிருஷ்ணகிரி நகரம், பஜீர்முகமது லேஅவுட், காந்தி நகர், கதவு எண்.58B முகவரியில் வசிக்கும் D.மதியழகன் அவர்களின் மனைவி **K.M.விஜயா** [Pan Card No.ABX.V4160G, Aadhaar No:2366 8930 3919 & செல்:9842744190] ஆகிய உட்கு,

கிருஷ்ணகிரி மாவட்டம், கிருஷ்ணகிரி வட்டம், கிருஷ்ணகிரி நகரம், ரஹமத்துல்லா நகர், கதவு எண்.2 முகவரியில் வசிக்கும் வேட்.ஜிக்கிரியா-வேட்.ரஹமத்துன்னிசா தம்பதியரின் குமாரர் **அப்துல்ரஷித்(எ)முக்தர்** [ஆதார் எண்.2454 2168 5430]-1, மேற்படி வேட்.ஜிக்கிரியா-வேட்.ரஹமத்துன்னிசா தம்பதியரின் குமார்த்தியும், அப்துல்ஜப்பார் மனைவியுமான **கம்ருன்னிசா** [ஆதார் எண்.3854 7387 0531]-2, மேற்படி 1நபரின் குமாரர்

கிரயம் பெறுபவர்

கிரயம் கொடுப்பவர்கள்
K. M. விஜயா
சண்மன
சுருத்தூர்
Purdang



ஆவணம்
எண்: 419 /2017
பக்க எண்: 1
மொத்த பக்கங்கள்: 20
1. இ.சுப்ப

27 JAN 2023



தமிழ்நாடு தமிழ்நாடு TAMILNADU ரூ.5000
2397
13-3-17
K. P. Muralikrishnan
சுயமேவ

T 409610
K. P. Muralikrishnan
K P MURALIKRISHNAN
SVLC 12/2008/KGI
KRISHNAGIRI TAMILNADU

- 2 -

A.சதாத் டல் அப்ரார் [Pan No:FSMPS1774Q]-3, மேற்படி 1நபரின் குமார்த்தியும், சேலம் மாவட்டம், சேலம் மாநகரம், சன்னியாசிகுண்டு, சன்னியாசிகுண்டு மெயின் ரோடு, அன்பு இல்லம் பின்புறம், இறைவன் நகர், கதவு எண்.3/65D முகவரியில் வசிக்கும் முகம்மது ஜாபர் மனைலியுமான தூர்தானா ஹயா [ஆதார் எண்.2089 3137 8788]-4 ஆகிய நாங்கள் எங்கள் முழுமன சம்மதியில் எழுதிக் கொடுத்த புஞ்சை விவசாய நிலத்தின் கிரய ஆவணம் யாதெனில்:-

எங்களில் 1,2நபர்களுக்கும், எங்களில் 1,2நபர்களின் தாயார் ரஹ்மத்துன்னிசா என்பவருக்கும் கிருஷ்ணகிரி சார்பதிவகத்தில் புத்தகம் 668 தொகுதி, 275 பக்கம் 2647/1947 எண்ணாக பதிவான பாக ஆவணத்தில் D ஷெட்யூலாக பாத்தியப்பட்டு, எங்களில் 1நபரின் பெயரிலும், எங்களில் 1,2நபர்களின் தாயார் ரஹ்மத்துன்னிசா பெயரிலும் 121

கிரயம் பெறுபவர்

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ஆவணம்
எண்: A19 /2017
பக்க எண்: 2
மொத்த பக்கங்கள்: 88
1. இ. அ. ப

கிரயம் கொடுப்பவர்கள்

[Handwritten signature]
சுயமேவ
Dudang



எண்ணாக கூட்டு பட்டா தாக்கலாகி அனுபவித்து வந்து, மேற்படி ரஹ்மத்துல்லா என்பவர் கடந்த 20.03.2015 ஆம் தேதியில் காலமான பிறகு, எங்களுக்கு வாரிசு முறைப்படி உரிமையான ஜெட்யூலில் கண்ட புஞ்சை விவசாய நிலத்தினை எங்களுடைய குடும்ப வகை செலவுகளுக்காகவும், குடும்ப வகை கடன்கள் தீர்க்கும் பொருட்டும் நாங்கள் உமக்கு கிரயத்திற்கு கொடுப்பதாய் பேசி, கிரயம் ரூ.1,20,00,000/- (எழுத்தால்) ஒரு கோடியே இருபது இலட்சம் ரூபாய்கள் என கிரயத்திற்கு நிச்சயித்து, அவ்வித கிரய தொகைகள் பூராவையும் அடியில் கண்ட சாட்சிகள் முன்பாக நாங்கள் உம்மிடமிருந்து ரொக்கமாக பெற்றுக் கொண்டு, மேற்படி வீதம் எங்களுக்கு பாத்தியப்பட்ட புஞ்சை விவசாய நிலத்தினை இன்றே உமக்கு இதன் மூலம் நாங்கள் கிரயமும், சுவாதீனமும் செய்து பாத்தியப்படுத்தி ஒப்படைத்து விட்டோம்.

இனி இன்று முதல் நேரே இச்சொத்தைப் பொறுத்து கிரயம், தானம், போக்கியம் போன்ற சகல விதமான பரிவர்த்தனைகளுடன், சகல உரிமைகளுடன், சர்வ சுதந்திரமுடன், ஏகபோகமாய் ஆண்டு அனுபவித்துக் கொள்ள வேண்டியது.

இனி முதல் இச்சொத்துக்கும் எங்களுக்கும், எங்களுடைய இதர எத்தன்மையான வாரிசுகாரர்களுக்கும், எவ்விதமான பாத்தியங்களும், சம்மந்தமும், பின் தொடர்ச்சியும், ஹக்கும் இனி அறவே கிடையாது.

நாளது வரையில் இச்சொத்தைப் பொறுத்து எவ்விதமான முன்வில்லங்கமும், விவகாரமும், கோர்ட்டு டிகிரியும், அட்டாச்மெண்டுகளும், டிராண்டுகளும் எதுவும் இல்லை. அப்படி ஏதேனும் இருப்பின் அவைகளை நாங்களே முன்னின்று எங்களுடைய சொந்த செலவில் தீர்த்து வைத்துக் கொடுக்க கடமைப்பட்டவர்கள்.

இனி மேற்படி சொத்துக்கு உண்டான பட்டாவினை நேரே உம்முடைய பெயருக்கு, பெயர் மாற்றம் செய்துக் கொள்ள வேண்டியது. இதற்குண்டான படிவங்களில் நாங்கள் கையொப்பம் செய்து கொடுத்துள்ளோம். உமது பெயரில் பட்டாவினை பெயர்மாற்றம் செய்து கொள்வதில் எங்களுக்கு எவ்விதமான ஆட்சேபனையும் கிடையாது என்று எங்கள் முழுமன சம்மதியில் எழுதிக் கொடுத்த புஞ்சை விவசாய நிலத்தின் பரிசுத்த விற்கிரய ஆவணம் சரி.

கிரயம் பெறுபவர்



கிரயம் பெறுபவர்கள்
Buvanes Babot
கும்புள்ளி
Sardar Mahan
Burdang

கிரய சொத்து விபரம்

கிருஷ்ணகிரி ரிடி, கிருஷ்ணகிரி ஜாயண்ட் 1 சப்ரிடி, கிருஷ்ணகிரி வட்டம், அக்கலாபுரம் கொத்தபேட்டா கிராமத்தில்

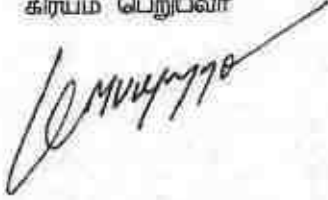
பட்டா எண்.121-க்கு சம்மந்தப்பட்ட சர்வே எண்.78/1B ச.பு.ஹ.அ.11.92.0 தீ.16.45 பைசா ஏக்கர்பாடி 29.44 சென்ட் நிலம் பூராவும், மேற்படி நிலத்தில் உள்ள குன்றுகளும், மாமரங்கள் 250-ம் உள்பட இந்த கிரய ஆவணத்திற்கு சம்மந்தப்பட்டது.

மேற்படி நிலத்திற்குண்டான மாலூல் பொது வறி பாத்தியங்கள் உள்பட.

மேற்படி சொத்து வெங்கடாபுரம் பஞ்சாயத்துக்கும் கிருஷ்ணகிரி யூனியனுக்கும் உட்பட்டது.

மேற்படி சொத்தின் தற்கால சந்தை மதிப்பு ரூ.1,20,26,000/-

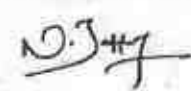

கிரயம் பெறுபவர்



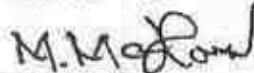
கிரயம் கொடுப்பவர்கள்

Munavar Bada
கும்பிள்ளனிலா
Saidal-laba
Durdang

சாட்சிகள்:-

1. S. Kanniam, S/o Sairavathi A/ TB Ling Road - Kumbhujala
2.  S/o. H. MOORULLAH, 3/65-D, IRASIVAN NAGAR, ANBU ELLOM
BACE SDA, SANYASALUNDU, SACEM- 636 015.
3.  (R. RAJUMARAN S/o Gvinde Chetty no: 2196
Sh Ramia Nagar. (Kanchipuram)

வரைவு தயாரித்தவர்



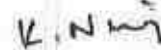
M.மாதையன்

ஆவண எழுத்தர்,

உரிமம் எண்:A/382/KSG/93,

சேலம் பெயின் ரோடு, கிருஷ்ணகிரி.

கணினியில் தட்டச்சு செய்தவர்



K.நாகராஜ்

ஸ்ரீ விநாயகா கணினி வேலை
தட்டச்சகம், கிருஷ்ணகிரி

ஆவணம்
எண்: A19 /2017
பக்க எண்: 4
மொத்த பக்கங்கள்: 20



- 5 -

1968-ம் வருட தமிழ்நாடு முத்திரைச்சட்டம் சொத்து மதிப்பைக் குறைத்து எழுதுவது தடுக்கும் விதி

3(1)-ன்படி அறிக்கை

வ. எண்	கிராமம்	ச.எண்.	தன்மை	பரப்பளவு	சந்தை மதிப்பு
1.	அக்கலாபுரம்	78/1B	புஞ்சை	ஏ.29.44 சென்ட்	ரூ.1,17,76,000.00
2.	கொத்தபேட்டா	250 மாமரங்கள் பூராவும்			ரூ. 2,50,000.00
				ஆக மொத்தம்	ரூ.1,20,26,000.00

கிரயம் பெறுபவர்

[Handwritten signature]

கிரயம் கொடுப்பவர்கள்

[Handwritten signatures and names: K. Sankaranarayanan, Saadathullah, Duedang]





Government of Tamil Nadu

தமிழ்நாடு அரசு

Department of Municipal Administration & Water Supply

DEATH CERTIFICATE (TRANSLATED VERSION) - இறப்பு சான்றிதழ்

Issued Under Section 12(1) of the Registration of Births and Deaths Act, 1969 and Rule 8 of Tamil Nadu Registration of Births and Deaths Rules 2000

This is to Certify that the following information has been taken from the original record of Death which is the register for (local area)

Division (03), KRISHNAGIRI MUNICIPALITY of Taluk KRISHNAGIRI of District KRISHNAGIRI of State TAMIL NADU.

தமிழ்நாடு அரசு தகவல்கள் தமிழ்நாடு மாநிலம் கிருஷ்ணகிரி மாவட்டம் கிருஷ்ணகிரி மாவட்டம்

பிரிவு எண் 03, கிருஷ்ணகிரி நகராட்சி கிளையின் கீழ்

அரசு இறப்பு பதிவேட்டிலிருந்து எடுக்கப்பட்டவை எனச் சான்றிதழ் வழங்கப்படுகின்றது.

Name பெயர் : RAHAMATUNNISA

Name of Mother தாயின் பெயர் : RAHEEMUNNISA

Name of Father / Husband தந்தை / கணவரின் பெயர் : MOHAD ZAKRIA

Age வயது : 90 Years

Sex பாலினம் : FEMALE

Date of Death இறந்த தேதி : 20/03/2015

Place of Death இறந்த இடம் : SAINT LOUIS HOSPITAL BANGALORE ROAD KRISHNAGIRI

Permanent Residential Address of the Deceased இறந்தவரின் நிகழ்வார விட்ட முகவரி : 2,RAHAMATULLA ST OLDPET KRISHNAGIRI

Address of the Deceased at the time of Death இறப்பின் போது முகவரி : 2,RAHAMATULLA ST OLDPET KRISHNAGIRI

Registration முகப்பதிவு எண் : 40/2015/03

Date of Registration பதிவு செய்த தேதி : 23/03/2015

Date of Issue வெளியீட்டுத் தேதி : 25/03/2015

ஆவணம் எண்: 419/2017 பக்க எண்: 6 மொத்த பக்கங்கள்: 80 1. இ. அ. ப.

Village Administrative Officer 72, KOTHA PETTA, KRISHNAGIRI TK. & DT.

Signature and Address of Issuing Authority சான்றிதழ் வெளியிடும் அதிகாரியின் கையொப்பம் / முகவரி

No disclosure shall be made of particulars regarding the cause of death as entered in the Register (இறப்பு குறிப்புகள் குறிப்பிட்ட காரணம் குறித்து சான்றிதழில் குறிப்பிடப்பட்ட தகவல்கள் வெளியிடப்படாது.)

ப.மு. 9032/2015/ஆ3



வட்டாட்சியர் அலுவலகம்
கிருஷ்ணகிரி



நாள் : 9

வருவாய் துறை

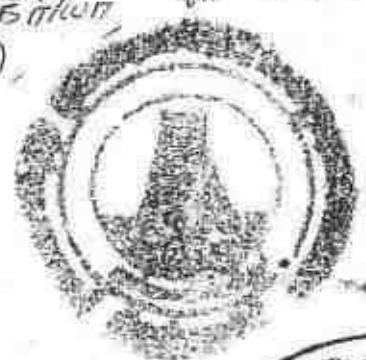
வாரிக சான்று

கிருஷ்ணகிரி வட்டம்.....கிருஷ்ணகிரி..... தரப்பு
.....பண்டைய சபை..... நடைமுறை துல்லி வரி விதிப்பு..... என்ற முகவரியில்
வசித்து 2015-16 ஆண்டு காலமான கிருஷ்ணகிரி திருமதி..... நடைமுறை துல்லி வரி விதிப்பு.....
த/பெ. ச/பெ. மிகைமதி ஐக்கிரியா..... என்பவருக்கு
கீழ்க்கண்டவர்கள் மட்டும் வாரிகதாரர்கள் என்று சான்றுளிக்கப்படுகிறது.

வ. எண்.	வாரிகதாரரின் பெயர்	வயது	இறந்தவருக்கு உறவு முறை
1.	M.A.R. மிகீதாள்	75	மகன்
2.	சுமீ நகீன்கா (கிதி துல்லி உடமை)	72	மகன்

வட்டாட்சியர்
கிருஷ்ணகிரி

மகன்
சுமீ மிகீதாள்,
த/பெ. (சுமீ) சுமீ நகீன்கா,
நடைமுறை துல்லி வரி விதிப்பு,
பண்டைய சபை,
கிருஷ்ணகிரி



Village Administrative Officer
72, KOTHA PETTA,
KRISHNAGIRI TK. & DT

ஆவணம்
எண்: 419/2017
பக்க எண்: 7
மொத்த பக்கங்கள்: 20
1. இ. சா. ப.

பெறுதல்



தமிழக அரசு

வருவாய்த் துறை

நில உரிமை விபரங்கள் : இ. எண் 10(1) பிரிவு

வட்டம் : கிருஷ்ணகிரி

மாவட்டம் : கிருஷ்ணகிரி

வருவாய் கிராமம் : கொத்தபேட்டா

பட்டா எண் : 121

உரிமையாளர்கள் பெயர்

1.	ஜகிரியாசாயு	மனைவி	ரஹமத்துனிசா
2.	ஜகிரியாசாயு	மகள்	அப்துல்லாஹீத்(எ)முக்தர்
3.	ஆனந்தன்	மனைவி	முனியம்மாள்

புல எண்	உட்பிரிவு	நன்செய்		புன்செய்		மற்றவை	
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை
		ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை
86	1A1	--	--	4 - 43.50	5.01	--	--
87	1B1	--	--	9 - 80.00	13.54	--	--
87	2	--	--	1 - 8.00	1.49	--	--
87	3	--	--	0 - 69.00	0.95	--	--
88	-	--	--	0 - 71.00	0.98	--	--
103	1	--	--	2 - 10.50	5.86	--	--
54	3	--	--	0 - 31.00	0.86	--	--
78	1B	--	--	11 - 92.00	16.45	--	--
				31 - 5.00	46.14		

குறிப்பு 2 :



1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <http://eservices.tn.gov.in> என்ற இணைய தளத்தில் 31/05/072/00121/20264 என்ற குறிப்பு எண்ணைக் கொண்டு செய்து உறுதி செய்துகொள்ளவும்.
2. இத் தகவல்கள் 12-03-2017 அன்று 11:21:11 AM நேரத்தில் அச்சடிக்கப்பட்டது.
3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

ஆவணம்
எண்: 19 / 2017
பக்க எண்: 8
மொத்த பக்கங்கள்: 20
1. இ. சா. ப.

அ-பதிவேடு விவரங்கள்



மாவட்டம் : கிருஷ்ணகிரி
 வட்டம் : கிருஷ்ணகிரி
 கிராமம் : கொத்தபேட்டா

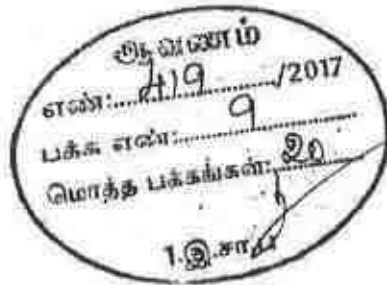
1. புல எண்	78	9. மண் வயனமும் ரகமும்	8 - 4
2. உட்பிரிவு எண்	1B	10. மண் தரம்	6
3. பழைய புல உட்பிரிவு எண்	-2	11. தீர்வை (ரூ - ஹெ)	1.38
4. பகுதி	P	12. பரப்பு (ஹெக்டேர் - ஏர்)	11 - 92.00
5. அரக / ரயத்துவாரி	ரயத்துவாரி	13. மொத்த தீர்வை (ரூ - பை)	16.45
6. நிலத்தின் வகை	புஞ்சை	14. பட்டா எண்	121
7. பாசன் ஆதாரம்	-	15. குறிப்பு	-
8. இரு போகமா	-	16. பெயர்	ரஹமத்துனிசாமற்றாம 2பேர்

குறிப்பு 1:



1.

மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <http://eservices.tn.gov.in> என்ற இணைய தளத்தில் 80264 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.



சான்று

கிருஷ்ணகிரி மாவட்டம், கிருஷ்ணகிரி வட்டம், கிருஷ்ணகிரி நகரம், ரஹமத்துல்லா நகர், கதவு எண்.2 முகவரியில் வசிக்கும் லேட்.ஜிக்கிரியா-லேட்.ரஹமத்துன்னிசா தம்பதியரின் குமாரர்/குமார்த்தி அப்துல்ரஹித்(எ) முத்தர்-1. கம்ருன்னிசா-2 என்பவர்களுக்கு பாத்தியப்பட்ட 72நெ.கொத்தபேட்டா தரப்பு கிராமத்தில் பட்டா எண்.121-க்கு சம்மந்தப்பட்ட சர்வே எண்.78/1B ச.பு.ஹ.அ.11.92.0 தீ.16.45 பைசா ஏக்கர்படி 29.44 சென்ட் நிலம் பூராவும் விவசாய நிலமாக உள்ளது. மேற்படி நிலத்தில் குன்றுகளும், 250 மாமரங்களும் உள்ளது பூராவும் மேற்படி நபர்களின் அனுபவ சுவாதீனத்தில் இருந்து வருகிறது என இதன்மூலம் சான்றளிக்கிறேன்.


14/3/17
Village Administrative Officer
72, KOTHA PETTA,
KRISHNAGIRI TK. & DT.





DISTRICT : KRISHNAGIRI

No.124

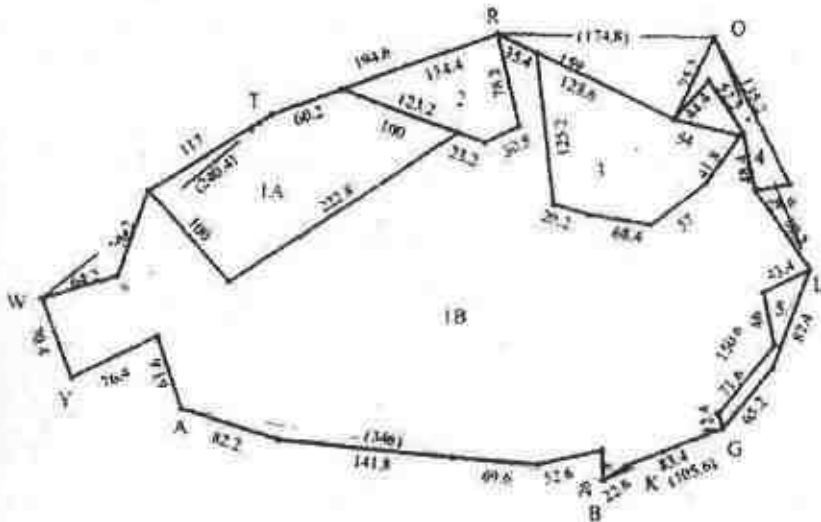
VILLAGE

TALUK : KRISHNAGIRI

NAME : KOTHAPETTA

FIELD No. 78

AREA : HEC 16 ARE 43.0



1		150.6		
2	24.6	112.8		
3		86	4.4	27
4	9	99		
5		105.6		
6	9	9		
7		194.6		
8		133.8	68.4	22
9		174.8		
10	199	127.6		
11	147.8	100.2		
12		240.4		
13	24.8	151.2		
14		216.2	25.2	8
15		116.2	15.2	10
16		207.2		
17	17.4	175.4		
18	8.4	125.4		
19	32.2	124.2		
20	24.8	100.2		
21	105.2	15.0		
22	17.2	72.4	11	6
23		146		
24	12.2	263.8		
25	2.2	123		
26		53.6	4.8	2
27		5.4	25	1
28		8		

[Signature]
 19/3/23
 Village Administrative Officer
 72, KOTHA PETTA
 KRISHNAGIRI TK. & DT

ஆவணம்
 எண்: 219 /2017
 பக்க எண்: 11
 சேர்த்த பக்கங்கள்: 20
 I.இ.சா.ப.

1 - 5000

Scale: 1:5000

419/2017/BK1

முத்திரைச்சட்டம் பிரிவு 42-ன் கீழான சான்று

பு.எண் 58/2017

திருவாரூர் -ய் வசிக்கும் திருவாரூர் விஜயா என்பவரிடமிருந்து முத்திரைச் சட்டம் பிரிவு 41-ன் கீழ் முறையான /குறைய முத்திரைச்சட்டணம் ரூ.816820/உபாயம் ரூ.60000க்குப் பதினாயிரத்து ரூ.சான்ஸ் கிடுபர் மட்டும) வசூலிக்கப்பட்டது என மன்றிறைவடைந்து சமன்நாக்கிக்ிறேன்.

சா.ப.ஆ: கிருஷ்ணாகிரி அபயி
நாள்: 15/03/2017

சார் பதிவாளர் மற்றும் இந்திய
முத்திரைச்சட்டம் பிரிவு 41-ன் கீழ் ஆட்சியர்

கிருஷ்ணாகிரி அபயி சார் பதிவாளர் அலுவலகத்தில் 15/03/2017 அன்று 10-11 மணிகளுக்கிடையில் தாக்கல் செய்து
கட்டணம் ரூ 120570 செலுத்தியவர்

1 இடது பெரு விரல்



[Handwritten Signature]

மேல் விவரம் ஆவண வாசகப்படி

எழுதிக் கொடுத்ததாக ஒப்புக்கொண்டவர்

1 இடது பெரு விரல்



[Handwritten Signature]

மேல் விவரம் ஆவண வாசகப்படி



ஆவணம்
எண்: 419 /2017
பக்க எண்: 12
மொத்த பக்கங்கள்: 12
I.இ.சா.பு

Sheet no. 1 of 3

எழுதிக் கொடுத்ததாக ஒப்புக்கொண்டவர்



2 இடது பெரு விரல்



சீமன் விவரம்

மேல் விவரம் ஆவண வாசகப்படி

3 இடது பெரு விரல்



சீமன் விவரம்

மேல் விவரம் ஆவண வாசகப்படி

4 இடது பெரு விரல்



சீமன் விவரம்

மேல் விவரம் ஆவண வாசகப்படி



Sheet no. 2 of 3

1 இடது பெரு விரல்



சேஸ் விவாய் ஆவண வாசகப்படி

இன்னாரென் றுருபித்தவர்

1

வெயர் : ஆறுமுகம்

த/பெ கோலித்தசெட்டி

3/96 முடிமுழு நகர்
காவேரிப்பட்டணர்
கிருஷ்ணகிரி வட்டம்

2

வெயர் : கண்ணையன்

த/பெ முரீரங்கன்

4/1 T.B. விங்க் ரோடு
கிருஷ்ணகிரி வட்டம்

2017ம் ஆண்டு மார்ச் திங்கள் 15 ம் நாள்

சார் பதிவாளர் கிருஷ்ணகிரி ஆபி

1 புத்தகம் 2017 ம் ஆண்டு 419 ம் எண்ணாக பதிவு செய்யப்பட்டது



நாள் : 15/03/2017

சார் பதிவாளர்
கிருஷ்ணகிரி ஆபி





இந்திய அரசாங்கம்
Government of India

செ.எம்.விஜயா
K.M.Vijaya
பிறந்த நாள் / DOB : 25/07/1967
Qualification / Female



2366 8930 3919

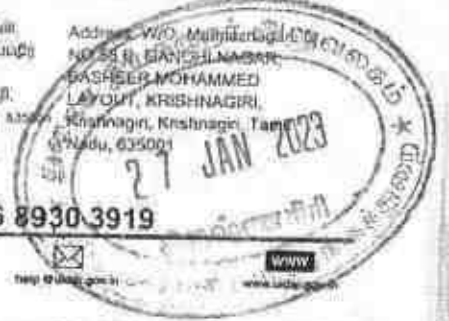
ஆதார் - சாதாரண மனிதனின் அதிகாரம்



Unique Identification Authority of India

முகவர்: உடுமலை
கனம் பி.பி. சரதா நகர் பஸ்
முடிப்பு, கோவை.
கிருஷ்ணாகிரி, கிருஷ்ணாகிரி,
கிருஷ்ணாகிரி, தமிழ் நாடு, 635001

Address: W/O, Muthiyasandigal,
NORTH B, SHANMUGANAGAR,
BASHEER MOHAMMED
LAYOUT, KRISHNAGIRI,
Krishnagiri, Krishnagiri, Tamil
Nadu, 635001



2366 8930 3919



PERMANENT ACCOUNT NUMBER

ABXPV4160G

Card NAME
KANTHASWAMY VIJAYA



Name of P.A (HE/HIS NAME)
KANTHASWAMY

Date of BIRTH / DATE OF BIRTH
30-11-1967

SIGNATURE

[Handwritten signature]

கனகசுவாமி ஆட்சாரணம், கோவை
Commissioner of Income-tax, Coimbatore

இந்த அட்டை கானாமற்பேரளகோடு/
கனகசுவாமி ஆட்சாரணம் இல்லத்தில்
ஈடுபாடுகளைக் கொண்டுவரவும் அறிவிக்கிறோம். தகவல்
அறியுமாறு அலுவலர் திருப்பி அனுப்புவது கோரப்படுகிறது.

வருமானவாரி ஆலையர்,
67-A, ரேஸ் கோர்ஸ் சாலை,
கோவை-641 018.

In case this card is lost/found, Kindly inform us to
the issuing authority:

Commissioner of Income - tax,
67-A, Race Course Road,
Coimbatore - 641 018.

[Large handwritten signature]

Kumar Bela
கிங்கிளர்
Sardar Laban
Durdang

ஆவணம்
எண்: 419 / 2017
பக்க எண்: 15
மொத்த பக்கங்கள்: 25
I.இ.சா.பு

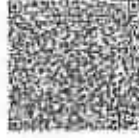


இந்திய அரசாங்கம்
Government of India

புகார்
Mukhtar



புகார் அட்டை ID: 150571333
பாலினம்: Male



2454 2168 5430

புகார் - சாதாரண மனிதனின் அதிகாரம்



இந்திய அரசாங்கம் - இந்திய அரசாங்கம்
Unique Identification Authority of India

புகார்: ஸி.ஓ. மஹமதுலா பதா
வா. 2, ரஹமதுல்லா தெரு, ஓல்டு பெட்டா,
கிர்ஷ்நாபுரி, கிர்ஷ்நாபுரி, தமிழ்
நாடு, 635001

Address: SiO: Mohd Zakia,
NO 2, RAHAMATULLA
STREET, OLD PETTAI,
Krishnagin, Krishnagin, Tamil
Nadu, 635001

2454 2168 5430



1807 800 1247



help@uidai.gov.in



www.uidai.gov.in

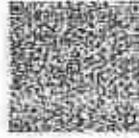


இந்திய அரசாங்கம்
Government of India

புகார்
Qamrunnes



புகார் அட்டை ID: 111111341
பாலினம்: Female



3854 7387 0531

புகார் - சாதாரண மனிதனின் அதிகாரம்



இந்திய அரசாங்கம் - இந்திய அரசாங்கம்
Unique Identification Authority of India

புகார்: ஸி.ஓ. அப்துல்ஜபார்
வா. 2, ரஹமதுல்லா தெரு,
ஓல்டு பெட்டா, கிர்ஷ்நாபுரி,
கிர்ஷ்நாபுரி, தமிழ் நாடு,
635001

Address: W/O: Abduljabbar,
D NO 2, RAHAMATULLA
STREET, OLD PETTAI,
Krishnagin, Krishnagin, Tamil
Nadu, 635001

3854 7387 0531



1807 800 1247



help@uidai.gov.in



www.uidai.gov.in

Handwritten signature

*Mukhtar Bad
கிர்ஷ்நாபுரி
Saeedulaha
Duedang*

ஆவணம்
எண்: 419 /2017
பக்க எண்: 16
மொத்த பக்கங்கள்: 20
1. இ. சா. ப.

आयकर विभाग

INCOME TAX DEPARTMENT

A SAADAT UL ASRAH

ABDUR RASHEED

22/12/1985

Permanent Account Number

FSMPS1774Q



भारत सरकार

GOVT. OF INDIA



In case this card is lost / found, kindly inform / return to
Income Tax PAN Services Unit, UTTISI,
Plot No. 3, Sector II, CBD Belapur,
New Mumbai - 400 674.
आयकर विभाग/पैन सेवा केंद्र मुंबई नई मुंबई
प्लॉट नं. 3, सेक्टर II, CBD बेलपुर,
नया मुंबई - 400 674



भारत सरकार
GOVERNMENT OF INDIA



துருதான ஹாய் முகமது ஜாஃபர்
Durdana Haya Mohammed Jaffer
பிறந்த நாள்: DOB: 29/03/1986
பாலினம்: FEMALE



2089 3137 8768

எனது அடையாளம், எனது அடைபாச்சம்.



भारतीय विशिष्ट पहचान प्राधिकरण
UNIQUE IDENTIFICATION AUTHORITY OF INDIA

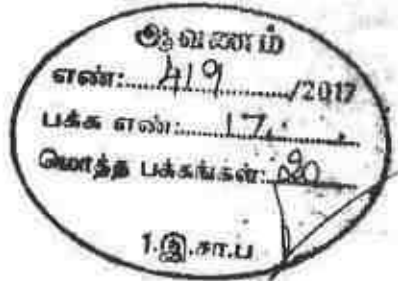
முகவரி:
கனகாபுரி தெரு: முகமது
ஜாஃபர், 3/65-12 கந்தலாறு
தளம், ஆண்டிபுரம்
பின்புறம், சன்னியாசலுண்டி
மையன் கோடு,
சென்னை-636015
Address:
W/O Mohammed Jaffer, 365-D
IRAVAN NAGAR, ANBU ILLAM
BACK SIDE SANNIYASUNDU
MAIN ROAD, SANNIYASUNDU
Salem,
Tamil Nadu - 636015

2089 3137 8768

MERA AADHAAR, MERI PEHACHAN

Handwritten signature

Handwritten notes:
Mukherjee Bader
Bis...
Sander...
Durdang



ELECTION COMMISSION OF INDIA

IDENTITY CARD

பெரிய கோட்டை - கன்னியாகுமரி
 பெரிய கோட்டை - கன்னியாகுமரி
 BVN2085488



Elector's Name: Arumugam
 மகமது அரமும்குமார்
 Father's Name: Govindachettyar
 தம்பையன் கோவிந்தசெட்டியார்
 Sex / பாலினம்: Male / ஆண்
 Age as on 1.1.2006: 28
 1.1.2006 ஆக 1.1.2006 வயது

Address: S-117
 Posing ward 2
 Erishall (p)
 KRISHNAGIRI

BVN2085488

பெரிய கோட்டை - கன்னியாகுமரி
 பெரிய கோட்டை - கன்னியாகுமரி
 பெரிய கோட்டை - கன்னியாகுமரி

Signature of Electoral Registration Officer
 பெரிய கோட்டை - கன்னியாகுமரி
 P.O. 078 - Kaveripattinam
 Assembly Constituency

078 - கன்னியாகுமரி
 சட்டமன்ற தொகுதி

Place: Krishnagiri
 இடம்: கிருஷ்ணகிரி
 Date: 05/04/2006

This card may be used as an Identity Card
 under different Government Schemes.
 இது அரசு திட்டங்களில் பங்கேற்க உபயோகமாகும்.



भारत सरकार
 GOVERNMENT OF INDIA



கன்னலையன் ச்ரீரங்கன்
 Kannalyan Sreerangan
 பிறந்த நாள் / DOB : 22/10/1955
 ஆண் / MALE

9156 9296 8721



भारतीय विशिष्ट पहचान प्राधिकरण
 UNIQUE IDENTIFICATION AUTHORITY OF INDIA

முகவரி:
 தஞ்சை / தஞ்சை கோட்டை:
 முன்னாள், மாண்பு 4/1, 1/1
 வீதிக்கு தெற்கே, கிருஷ்ணகிரி,
 கிருஷ்ணகிரி, கிருஷ்ணகிரி,
 கிருஷ்ணகிரி, தமிழ் நாடு,
 635001

Address:
 S/O. Sreerangan, D NO4/1, T B
 LINK ROAD, Krishnagiri,
 Krishnagiri, Krishnagiri,
 Krishnagiri, Tamil Nadu, 635001



1947
 1800 300 1947

www.uidai.gov.in

P.O. Box No. 1947,
 Bangalore-560 091

ஆதாரம் - சாதாரண மனிதனின் அதிகாரம்

[Handwritten signature]

[Handwritten signature]
 B. S. Sreerangan
 B. S. Sreerangan
 B. S. Sreerangan
 B. S. Sreerangan

ஆவணம்
 எண்: A19 / 2017
 பக்க எண்: 18
 மொத்த பக்கங்கள்: 20
 1.9.2017

Government of Tamil Nadu
Registration Department
Acknowledgement



Reference Details

SRO Name	Krishnagiri Joint I
Application No.	S01KMV5GN201703150004272
Transaction No.	REG20170315006624
Transaction Date	15/03/2017

Application Details

Applicant Name	K M VIJAYA
Service Type	Document Registration (New) in SRO
Stamp Duty collected under Section 41	816820.00

Payment Details

Name Of the Bank	SBI
Bank Ref. No.	IK00CXKJH8
Payment Mode	Online
Amount Paid	Rs.816820.00
Payment Date	15/03/2017

Printed On :15/03/2017 4:00 PM



Government of Tamil Nadu

Registration Department

Acknowledgement



Reference Details

SRO Name	Krishnagiri Joint I
Application No.	S01KMV5GN201703140002973
Transaction No.	REG20170314003944
Transaction Date	14/03/2017

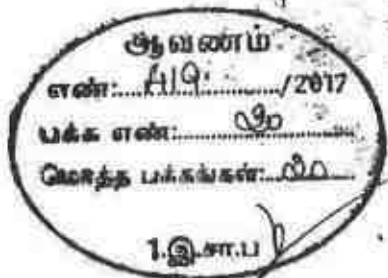
Application Details

Applicant Name	K M VIJAYA
Service Type	Document Registration (New) in SRO
Sub Division Fee	40.00
Registration Fee	120360.00
IP Camera Fee	50.00

Payment Details

Name Of the Bank	SBI
Bank Ref. No.	IK00CWQQS1
Payment Mode	Online
Amount Paid	Rs.120450.00
Payment Date	14/03/2017

Printed On :14/03/2017 8.49 PM




S.DHANASEKAR, M.Sc.,(Geo)
Qualified Person

Reg. No 01BBB1005
Col Code 106 / 106



அறிவியல் புலம்
FACULTY OF SCIENCE

பெரியார் பல்கலைக்கழக ஆட்சிக்குழு 2003 ஆம் ஆண்டு ஏப்ரல் மாதம்
நடந்த பயன்பாட்டு புவியமைப்பியல் தேர்வில்
S தனசேகர் என்பவர்
முதல் வகுப்பில் தேர்ச்சி பெற்றார் என்று தக்க தேர்வாளர்கள்
சான்றளித்தபடி அறிவியல் நிறைஞர் என்னும்
பட்டத்தை அவருக்குப் பல்கலைக்கழக இலச்சினையுடன் வழங்குகிறது.

The Syndicate of the Periyar University hereby makes known
that **DHANASEKAR S** *has been*
admitted to the **DEGREE OF MASTER OF SCIENCE in**
APPLIED GEOLOGY

he/she having been certified by duly appointed Examiners to be qualified
to receive the same and was placed in the **FIRST CLASS** *at the*
Examination held in **APRIL 2003**



Given under the seal of this University

நாள்
Dated 15-09-2004
சேலம்-636011, தமிழ்நாடு, இந்தியா.
Salem 636011, TamilNadu, India.


பதிவாளர்
Registrar


துணைவேந்தர்
Vice-Chancellor


S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

PRITHVI MINERALS,



ANNEXURE

© : 04288 - 262489


VARANALLAMPALAYAM,
ALATHUR POST - 637 303.
SANKARI Tk, Salem Dt., TamilNadu


Date : ...27.12.08.

TO WHOMSOEVER IT MAY CONCERN

This is to certify that SHRI S. DHANASEKAR, S/o. Shri A. Sundaram residing at No.8/3, Kullappan Street, Omalur Taluk, Salem District - 636 455 is working in our mines for the date of 15.10.2003 to till date as Geologist. During the above tenure of service his execution of the assigned work is exemplary and worth mentioning. We wish him success in his future endeavours.

For PRITHVI MINERALS,


(T.P. THANGAVEL.)
Partner


S.DHANASEKAR, M.Sc.(Geo)
Qualified Person

From
Thiru L.Suresh,M.Sc.,
Deputy Director,
Geology and Mining,
Krishnagiri.

To
Tmt.K.M.Vijaya,
W/o, D.Mathiyalagan,
No.58 B Gandhi Nagar,
Krishnagiri Town and District.
Pin-635001



Lr.No. 419/2017/Mines

dated: 29.12.2017

Sir,

Sub: Mines and Minerals - Krishnagiri District and Taluk Kothapetta village - S.F.No.78/1B(P) - Over an extent of 4.00.0 Hects of patta lands - Quarry Lease for Rough Stone Application preferred by Tmt.K.M.Vijaya, W/o,D.Mathiyalagan - Precise Area given - Draft Mining Plan submitted - Mining Plan approved - reg.

Ref: 1.The Commissioner of Geology and Mining i/c, Chennai - 32 letter Rc.No.3868/LC/2012 dated 19.11.2012
2.District Collector, Krishnagiri Lr.No.419/2017 Mines-1 dated 02.12.2017
3. Tmt.K.M.Vijaya,W/o,D.Mathiyalagan No.58 B Gandhi Nagar, Krishnagiri Town and District Letter. Dated: Nil received on 29.12.2017

In the reference 2nd cited Tmt.K.M.Vijaya, W/o,D.Mathiyalagan, No.58 B Gandhi Nagar,Krishnagiri Town and District. Pin-63500 I have been issued precise area over an extent of 4.00.0 hecets. in patta land in S.F.No. 78/1B(P) of Kothapetta village, Krishnagiri Taluk, and District for the proposed grant of rough stone quarry lease for a period of 5 years under the provisions of Rule 19(1) and 20 of Tamil Nadu Minor Mineral Concession Rules, 1959 and had been directed to submit approved mining plan and Environment Clearance.

2. In this regard, in the reference 3rd cited Tmt.K.M.Vijaya,W/o,D.Mathiyalagan, No.58 B Gandhi Nagar,Krishnagiri Town and District. Pin-63500 had submitted 03 copies of draft Mining Plan for approval for the said quarry lease.

3. The Draft Mining Plan submitted by Tmt.K.M.Vijaya,W/o,D.Mathiyalagan has been scrutinized as per the guide lines/ Instructions issued by the Commissioner of Geology and Mining, Chennai-32 in the reference first cited. The mining plan is prepared in accordance with the guidelines / instructions issued and tallies with the field conditions. The special conditions imposed in the precise area letter had been incorporated in the Mining Plan.

4.The details of quarries situated within 500 mts radial distance from the proposed area is as follows:

Name of the lessee	Village	S.F.No. Extent in Hect	Collector's Proceeding No. & date	Lease period
1.M/s.Devarajaa MSand	Kothapetta	78/1A(P) & 78/1B(P) 4.00.0 hecets	..	Applied area
2.Tmt.K.M.Vijaiya	Kothapetta	78/1B(P) 4.00.0 hecets	..	Instant Proposal
3.Ganesan,	Kothapetata	56/1 (Part.D) 2.54.0 Hects.	Roc.611/2009/Mines dated 14.05.2015	14.05.2015 to 13.05.2020
4.S.Sumitha Sankar	Kothapetta	56/1 (Part-5) 1.20.0 Hects,	Roc.No.49/2016 Mines dated 18.08.2016	01.09.2016 to 31.08.2021
5.Qummurunnisa	Kothapetta	87/1B1 (Part) and 87/1B2 (P) 4.75.0 Hects.	Roc.08/2013/Mines dated 05.02.2016	02.03.2016 to 01.03.2021
6.A.Madesh	Kothapetta	56/1 (Part-C) 3.06.0 Hects	Roc.126/2010 Mines dated 27.10.2009	03.05.2010 to 02.05.2015
	Total	19.55.0		

5. Hence, as per the guidelines / instructions issued by the Commissioner of Geology and Mining, Chennai, the said mining plan is hereby approved subject to the following conditions.

- i) That the mining plan is approved without prejudice to any other law applicable to the quarry lease from time to time whether such laws are made by the Central Government, State Government or any other authority.
- ii) This approval of the mining plan does not in any way imply the approval of the Government in terms of any other provisions of Mines and Minerals Development and Regulation) Act 1957, or any other connected laws including Forest (Conservation) Act 1957, or any other connected Laws industry Forest (Conservation) Act 1980, Forest Conservation Rules 1981 Environment protection Act 1980, Indian Explosive Act 1884 (Central Act IV of 1884) and the rules made there under, Minor Mineral Conservation and Development Rules, and The Tamil Nadu Minor Mineral Concession rules, 1959.
- iii) That the mining plan is approved without prejudice to any other order or directions from any court of competent jurisdiction.

iv) The following special conditions imposed in the District Collector, Krishnagiri letter in Roc.No.412/2017/Mines-1 dated 11.12.2017 should be adhered without any deviation while quarrying.

- a) A safety zone of 7.5 mts. should be left out for the adjoining patta lands.
- b) At any cost no quarrying should be carried out in the adjacent Government land and no hindrance should be given to the public.



6. The applicant should get prior clearance from the District level Environment Impact Assessment Authority, Krishnagiri District and should submit it to the District Collector, Krishnagiri.

ok

[Signature]
Deputy Director,
Geology and Mining,
Krishnagiri.

Copy submitted to

1. The Chairman, Krishnagiri District Level Environment Impact Assessment Authority, Collectorate, Krishnagiri
2. The Commissioner of Geology and Mining, Guindy, Chennai -32.

[Signature]
S.DHANASEKAR, M.Sc., (Geo)
Qualified Person



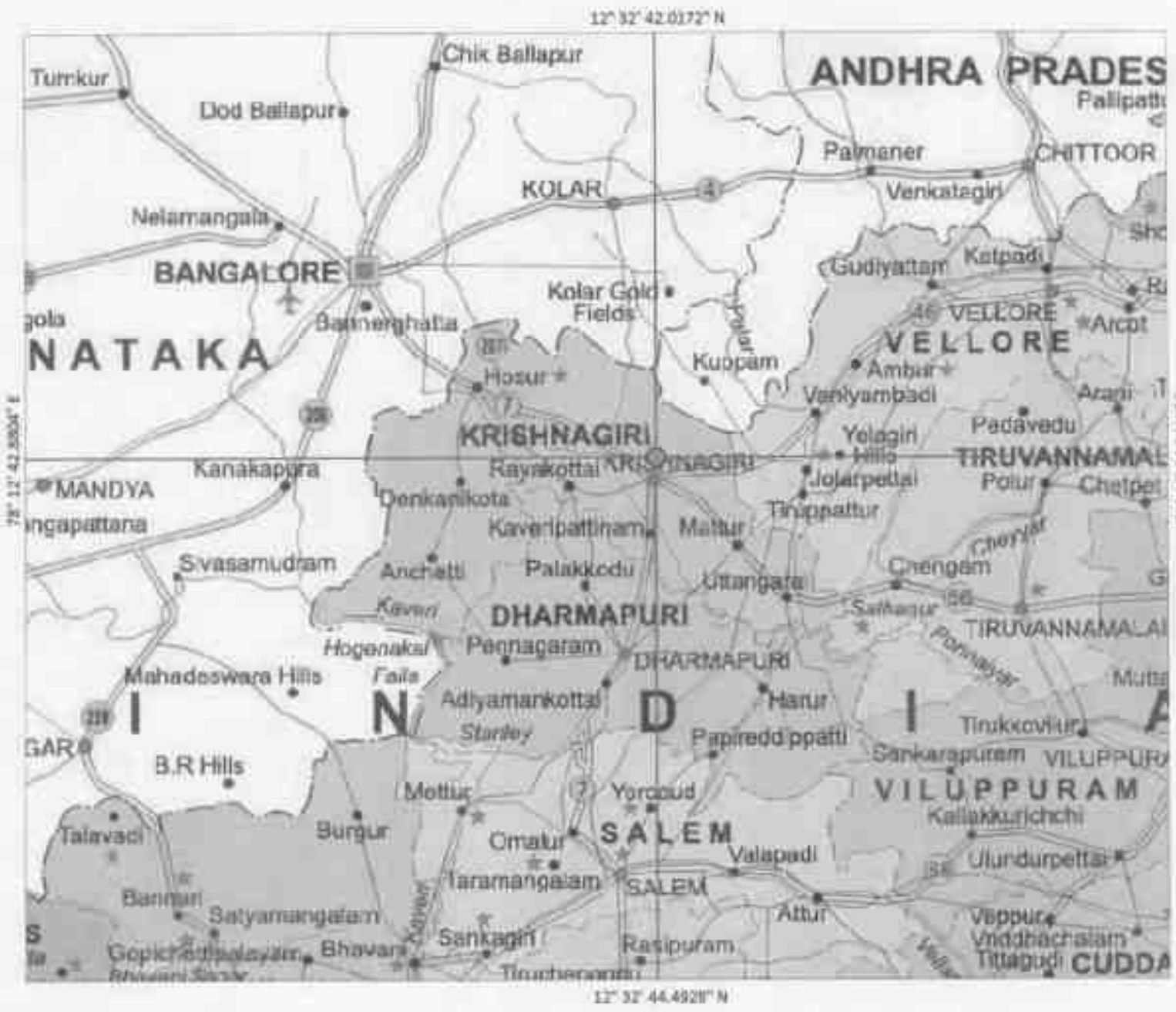
PHOTO SHOWN EXISTING LEASE AREA VIEW-1



PHOTO SHOWN EXISTING LEASE AREA VIEW- 2




S.DHANASEKAR, M.Sc., (Geo)
Qualified Person




PLATENO. 1
DATE OF SURVEY: 02-11-2022
LESSEE ADDRESS: SRI K.M. VIJAYA, NO.5 D.HATHAZHINAGAR, NO.58 B GANDHI NAGAR, KRISHNAGIRI TOWN, KRISHNAGIRI DISTRICT - 635 001.
LOCATION OF QUARRY: EXTENT : 4.00.0 Hk. S.P. NO : 78/18(PART), VILLAGE : KOTHAPETTA, TALUK : KRISHNAGIRI, DISTRICT : KRISHNAGIRI.
INDEX QUARRY LOCATION : ● TOWN SHOWN : 1:1/10 LATITUDE : 12° 32' 42.0372" N & 12° 32' 44.8928" N LONGITUDE : 78° 12' 34.8004" E & 78° 12' 34.8004" E
LOCATION PLAN NOT TO SCALE
PREPARED BY: I. DEVI SURESH / 2020217 THAT THE SURVEY AND MAP SHALL BE VALID ONLY FOR THE PURPOSE FOR WHICH THEY WERE PREPARED.  I. DEVI SURESH SURVEYOR GENERAL



PLATE NO. 12
 DATE OF SURVEY: 03.11.2022

LESSEE ADDRESS
 TMT. K.M. VIJAYA
 W/O. D.MATHEESHAN
 No. 58 B GANDHI NAGAR
 KRISHNAGIRI TOWN
 KRISHNAGIRI DISTRICT- 535 001.

LOCATION OF QUARRY:
 EXTENT : 4.00.0 HA,
 S.F.NO : 78/1B(PART),
 VILLAGE : KOTHAPETTA,
 TALUK : KRISHNAGIRI,
 DISTRICT : KRISHNAGIRI.

INDEX

QUARRY LEASE AREA

GEN BOUND

TOP SHEET NO : 1742
 LATITUDE : 12° 32' 42.0172" N to 12° 32' 44.4038" N
 LONGITUDE : 78° 12' 54.9108" E to 78° 12' 42.8942" E

GENERAL DATA	
Area	4.00.0 Ha
Top Sheet No.	1742
Latitude	12° 32' 42.0172" N to 12° 32' 44.4038" N
Longitude	78° 12' 54.9108" E to 78° 12' 42.8942" E
Scale	1:50,000
Projection	UTM
Zone	48 Q
Datum	WGS 84
Units	Meters
Accuracy	± 1:50,000
Map Date	03.11.2022
Map No.	12
Sheet No.	1742
Block No.	78/1B(PART)
Village	KOTHAPETTA
Taluk	KRISHNAGIRI
District	KRISHNAGIRI
State	KARNATAKA
Country	INDIA

TOPO SHEET MAP OF
 THE LEASE AREA
 SCALE: 1:50,000

PREPARED BY:
 S. SURESH KANTH
 S.A. DEPT. CIVIL ENGRG. & SURV. DIV. 402
 CIVIL ENGRG. & SURV. DIV. 402
 CIVIL ENGRG. & SURV. DIV. 402

S. Suresh Kanth
 S. SURESH KANTH
 CIVIL ENGINEER

12° 32' 45.4810" N
78° 12' 48.4133" E

12° 32' 44.4928" N
78° 12' 41.8804" E



12° 32' 38.8787" N
78° 12' 52.1976" E



PLATE NO: ID

DATE OF SURVEY: 02-11-2022

LESSEE ADDRESS:

MRT. K.M. VIJAYA,
W/O. D. MATIASAHAGAN,
No. 58 B GANDHI NAGAR,
KRISHNAGIRI TOWN,
KRISHNAGIRI DISTRICT- ESN DIST.

LOCATION OF QUARRY:

EXTENT : 4.00.0 HA,
S.F. NO. : 76/18(PART),
VILLAGE : KOTHAPETTA,
TALUK : KRISHNAGIRI,
DISTRICT : KRISHNAGIRI.

INDEX

QUARRY LEASE BOUNDARY
500M RADIUS
300M RADIUS

SATELLITE IMAGE

(Source: BATHIND)

SCALE 1:5000

PREPARED BY:

I HEREBY CERTIFY THAT THE PLACED
HAS BEEN CHECKED BY ME AND IS CORRECT
TO THE BEST OF MY KNOWLEDGE


S. SURESH
S. SURESH

1	OF 20/01/2011	10/11/2011
2	OF 20/01/2011	10/11/2011
3	OF 20/01/2011	10/11/2011
4	OF 20/01/2011	10/11/2011
5	OF 20/01/2011	10/11/2011
6	OF 20/01/2011	10/11/2011
7	OF 20/01/2011	10/11/2011
8	OF 20/01/2011	10/11/2011

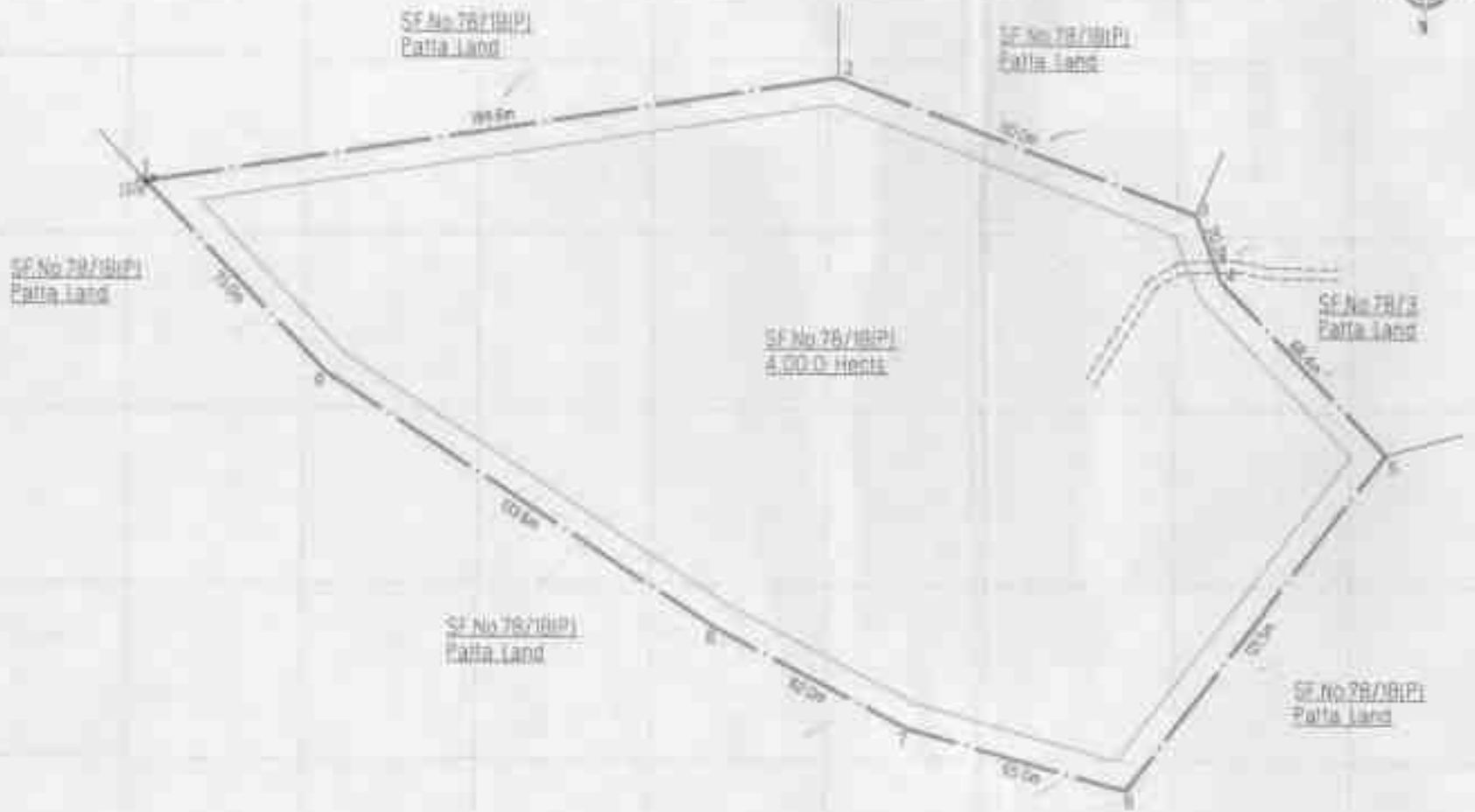


PLATE NO: 2
DATE OF SURVEY: 03-11-2011

LESSEE ADDRESS
THE A. ALBERTA,
P.O. RATHNANGAR,
No. 28 B, SARDAR ROAD,
KISHINAGIRI TOWNSHIP,
KISHINAGIRI DISTRICT - 517 001

LOCATION OF QUARRY
SYSTEM : K.R.D. No.
S.T. NO : 78 B (PART),
VILLAGE : KUTHAPETTA,
TALUK : KISHINAGIRI,
DISTRICT : KISHINAGIRI

LEGEND
QUARRY LEASE BOUNDARY [---]
2 M SAFETY DISTANCE [---]
TEMPORARY STOCK AREA [---]
APPROACH ROAD [---]

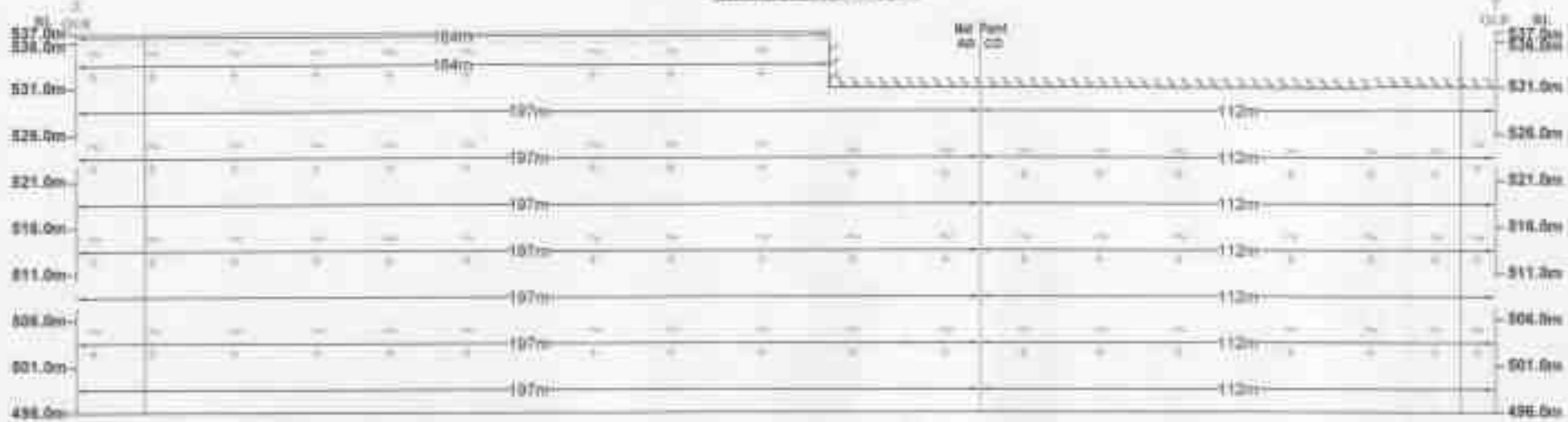
SCALE: 1:5000

DATE: 27.08.2011

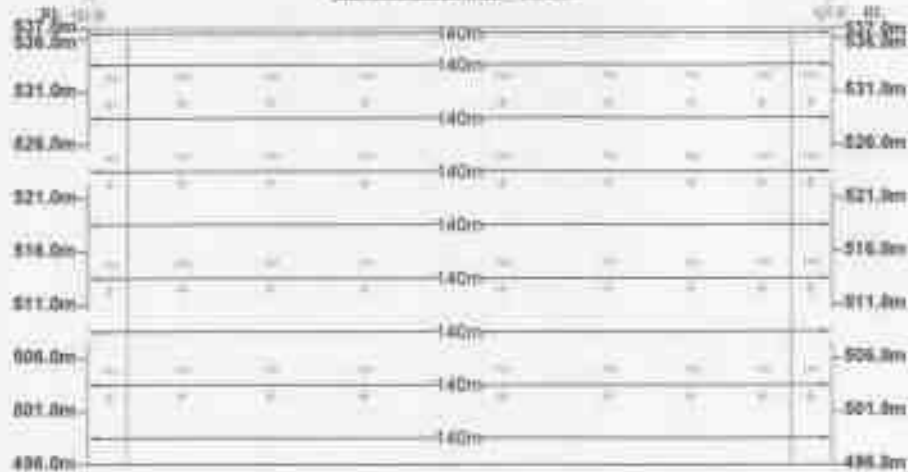
PREPARED BY:
[Signature]



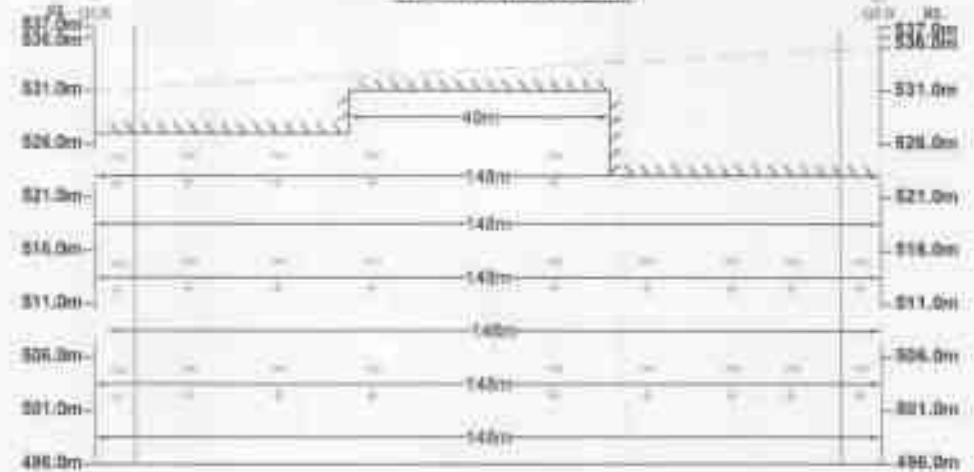
SECTION ALONG X-Y



SECTION ALONG A-B



SECTION ALONG C-D

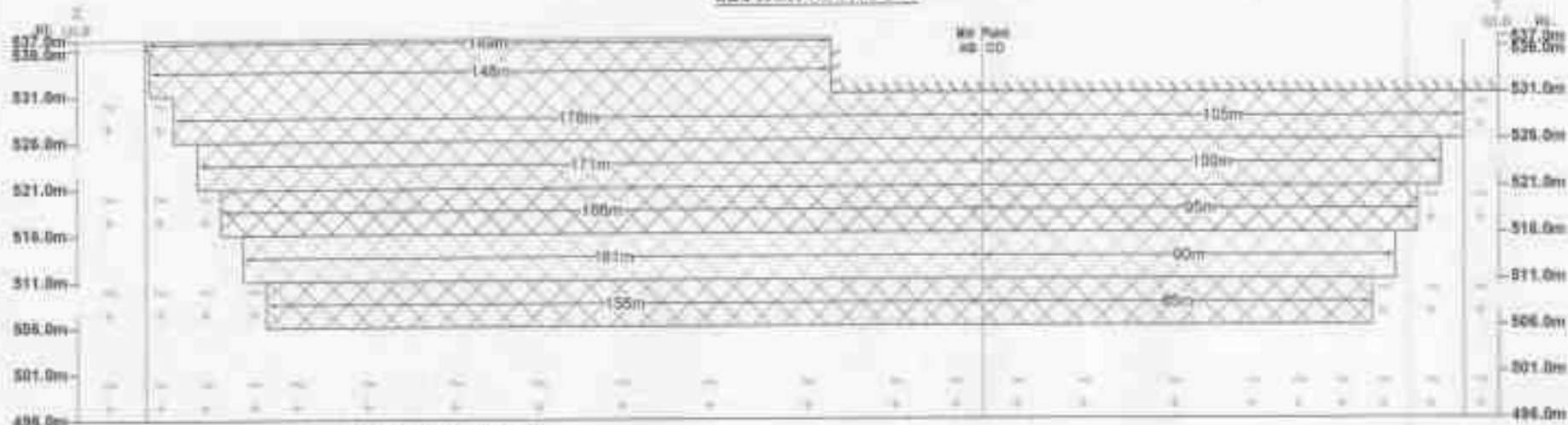


BIOLOGICAL RESERVE							
Sl. No.	Area (sq. m)	Height (m)	Depth (m)	Volume (cu. m)	Percentage of total area (%)	Percentage of total volume (%)	Total Area (sq. m)
1	154	1.50	1.50	346.50	0.000136	0.000004	346.50
2	154	1.50	1.50	346.50	0.000136	0.000004	346.50
3	154	1.50	1.50	346.50	0.000136	0.000004	346.50
4	154	1.50	1.50	346.50	0.000136	0.000004	346.50
5	154	1.50	1.50	346.50	0.000136	0.000004	346.50
6	154	1.50	1.50	346.50	0.000136	0.000004	346.50
7	154	1.50	1.50	346.50	0.000136	0.000004	346.50
8	154	1.50	1.50	346.50	0.000136	0.000004	346.50
9	154	1.50	1.50	346.50	0.000136	0.000004	346.50
10	154	1.50	1.50	346.50	0.000136	0.000004	346.50
11	154	1.50	1.50	346.50	0.000136	0.000004	346.50
12	154	1.50	1.50	346.50	0.000136	0.000004	346.50
13	154	1.50	1.50	346.50	0.000136	0.000004	346.50
14	154	1.50	1.50	346.50	0.000136	0.000004	346.50
15	154	1.50	1.50	346.50	0.000136	0.000004	346.50
16	154	1.50	1.50	346.50	0.000136	0.000004	346.50
17	154	1.50	1.50	346.50	0.000136	0.000004	346.50
18	154	1.50	1.50	346.50	0.000136	0.000004	346.50
19	154	1.50	1.50	346.50	0.000136	0.000004	346.50
20	154	1.50	1.50	346.50	0.000136	0.000004	346.50
21	154	1.50	1.50	346.50	0.000136	0.000004	346.50
22	154	1.50	1.50	346.50	0.000136	0.000004	346.50
23	154	1.50	1.50	346.50	0.000136	0.000004	346.50
24	154	1.50	1.50	346.50	0.000136	0.000004	346.50
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28	154	1.50	1.50	346.50	0.000136	0.000004	346.50
29	154	1.50	1.50	346.50	0.000136	0.000004	346.50
30	154	1.50	1.50	346.50	0.000136	0.000004	346.50
31	154	1.50	1.50	346.50	0.000136	0.000004	346.50
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53	154	1.50	1.50	346.50	0.000136	0.000004	346.50
54	154	1.50	1.50	346.50	0.000136	0.000004	346.50
55	154	1.50	1.50	346.50	0.000136	0.000004	346.50
56	154	1.50	1.50	346.50	0.000136	0.000004	346.50
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63	154	1.50	1.50	346.50	0.000136	0.000004	346.50
64	154	1.50	1.50	346.50	0.000136	0.000004	346.50
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72	154	1.50	1.50	346.50	0.000136	0.000004	346.50
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82	154	1.50	1.50	346.50	0.000136	0.000004	346.50
83	154	1.50	1.50	346.50	0.000136	0.000004	346.50
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91	154	1.50	1.50	346.50	0.000136	0.000004	346.50
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93	154	1.50	1.50	346.50	0.000136	0.000004	346.50
94	154	1.50	1.50	346.50	0.000136	0.000004	346.50
95	154	1.50	1.50	346.50	0.000136	0.000004	346.50
96	154	1.50	1.50	346.50	0.000136	0.000004	346.50
97	154	1.50	1.50	346.50	0.000136	0.000004	346.50
98	154	1.50	1.50	346.50	0.000136	0.000004	346.50
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100	154	1.50	1.50	346.50	0.000136	0.000004	346.50

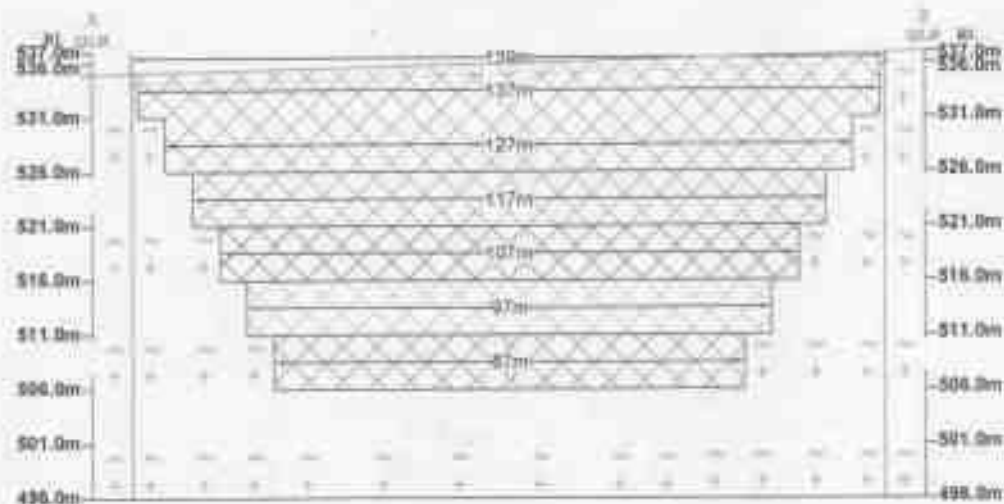
TOTAL DEPTH = 43m

<p>INDEX</p> <p>Q.L. BOUNDARY </p> <p>7.5m SAFETY DISTANCE </p> <p>GRAVEL </p> <p>ROUGH STONE </p> <p>EXISTING P.T. </p>	<p>LESSRE ADDRESS:</p> <p>TMT.K.M.VIJAYA, W/O.D.MATHIAZHAGAN, No.58 B GANDHI NAGAR, KRISHNAGIRI TOWN, KRISHNAGIRI DISTRICT- 838 001.</p>	<p>PLATE NO: III-A</p> <p>DATE OF SURVEY: 02-11-2022</p>
	<p>LOCATION OF QUARRY:</p> <p>EXTENT : 4.50.0 Ha. S.F.NO : 76/18C PART, VILLAGE : KOTHAPETTA, TALUK : KRISHNAGIRI, DISTRICT : KRISHNAGIRI.</p>	<p>SCALE: HOR-1:1000 VER-1:500</p> <p>PREPARED BY:</p> <p></p> <p>L. SIVASUBRAMANIAM, Sr. Surveyor</p>

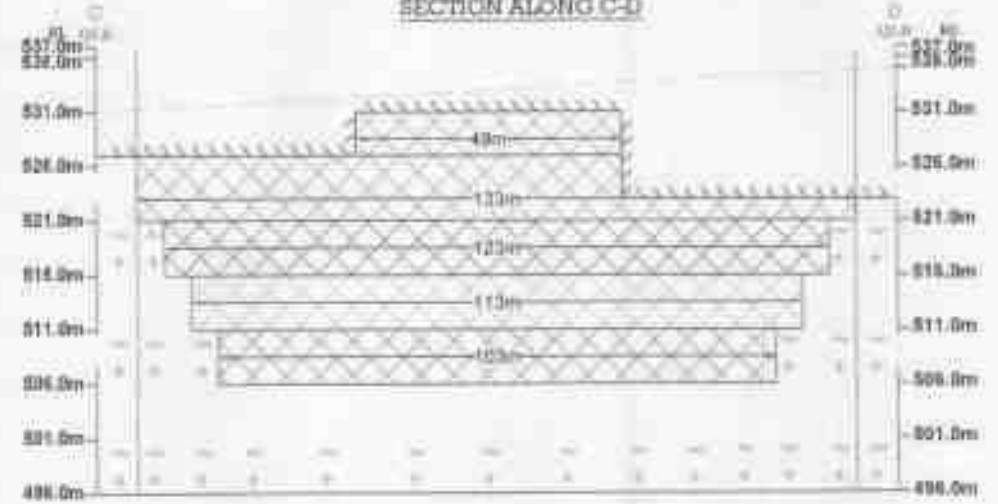
SECTION ALONG X-Y



SECTION ALONG A-B



SECTION ALONG C-D



TOTAL DEPTH = 33m

30.03.2023 TO 24.03.2024 PROPOSED EXCAVATION	[Pattern]
25.03.2024 TO 24.03.2025 PROPOSED EXCAVATION	[Pattern]
25.03.2025 TO 24.03.2026 PROPOSED EXCAVATION	[Pattern]
25.03.2026 TO 24.03.2027 PROPOSED EXCAVATION	[Pattern]
25.03.2027 TO 24.03.2028 PROPOSED EXCAVATION	[Pattern]

Sl. No.	Section	Area	Vol. to be excavated (m ³)	Vol. to be backfilled (m ³)	Net Vol. to be excavated (m ³)	Remarks
1	SECTION ALONG X-Y	140.00	140.00	140.00	0.00	
2	SECTION ALONG A-B	120.00	120.00	120.00	0.00	
3	SECTION ALONG C-D	49.00	49.00	49.00	0.00	
4	TOTAL	309.00	309.00	309.00	0.00	

INDEX

Q.L. BOUNDARY	[Symbol]
7.5m SAFETY DISTANCE	[Symbol]
GRAVEL	[Symbol]
ROUGH STONE	[Symbol]
QUARRY PIT	[Symbol]
PROPOSED BACKFILLING AREA	[Symbol]

LESSEE ADDRESS:
 TMT. K.H. VOIYA,
 W/O.D. MATHAZHAGAN,
 NO.58 B GANDHI NAGAR,
 KRISHNAGIRI TOWN,
 KRISHNAGIRI DISTRICT- 625 001.

LOCATION OF QUARRY:
 EXTENT : 4.00.0 HA,
 S.F. NO : 78/18(PART),
 VILLAGE : KOTHARETTA,
 TALUK : KRISHNAGIRI,
 DISTRICT : KRISHNAGIRI.

PLATE NO: IV-A
 DATE OF SURVEY: 02-11-2022

YEARWISE DEVELOPMENT & PROTECTION STATUS
 SCALE: HOE-1:1000
 VER-1:300

PREPARED BY:
 [Signature]
 421A

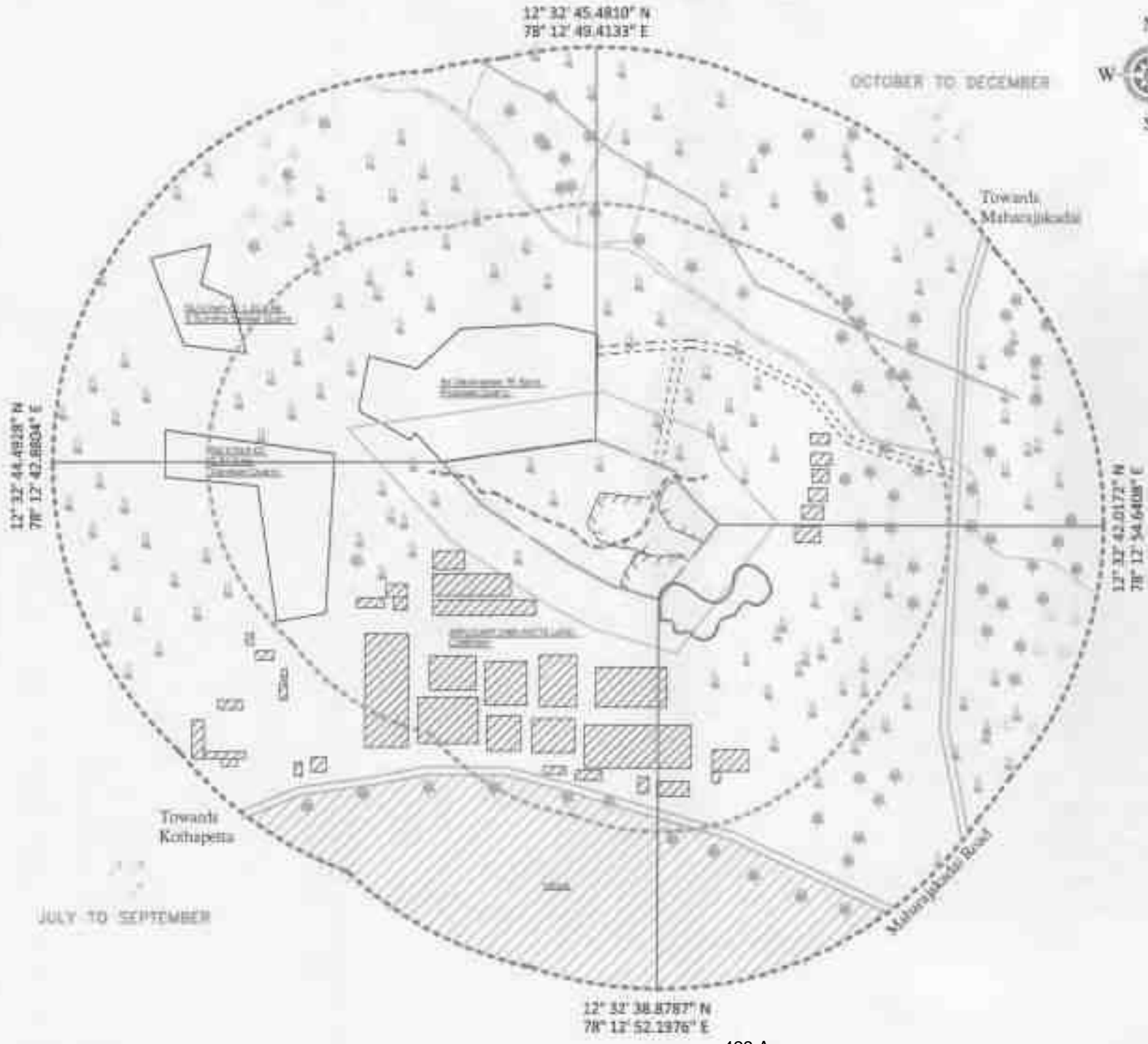


PLATE NO: VI
 DATE OF SURVEY: 02-07-2022

LESSEE ADDRESS
 M/s. K. H. VIJAYA
 W/O. D. MATHIAZHARAN,
 No. 58 B GANDHI NAGAR,
 KRISHNAGIRI TOWN,
 KRISHNAGIRI DISTRICT - 685 302.



LOCATION OF QUARRY:

EXTENT : 4.00.0 HA,
 S.P. NO : 78/18(PART),
 VILLAGE : KOTHAPETTA,
 TALUK : KRISHNAGIRI,
 DISTRICT : KRISHNAGIRI.

INDEX

Q.L. BOUNDARY	
500M RADIUS	
300M RADIUS	
60M RADIUS	
APPROACH ROAD	
QUARRY ROAD	
TREES	
BARREN LAND	
WIND DIRECTION	
ADJACENT QUARRY	
SEASONAL STREAM (DD41)	
LOW POWER EB LINE	
HELLOCK	

ENVIRONMENT PLAN

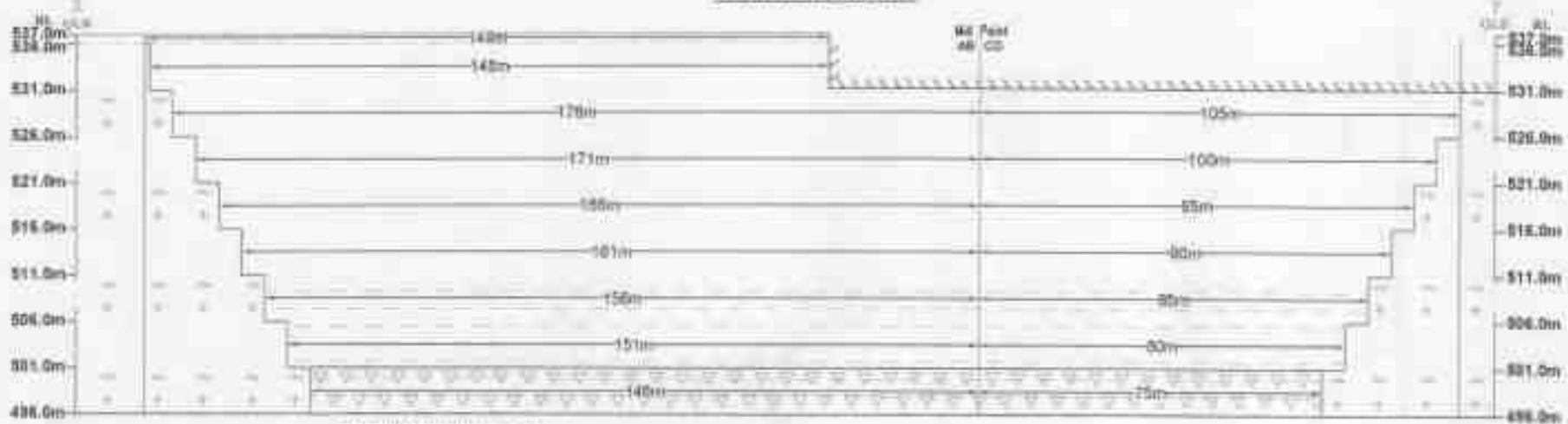
SCALE: 1:5000

PREPARED BY:

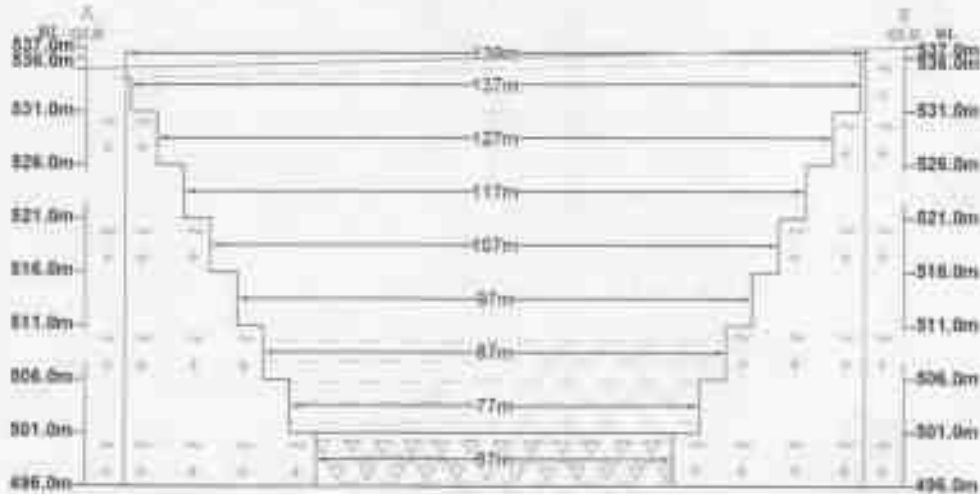
I HEREBY CERTIFY THAT THE PLAN HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE.

K. SRINIVASAN,
 SURVEYOR GENERAL,
 KRISHNAGIRI DISTRICT.

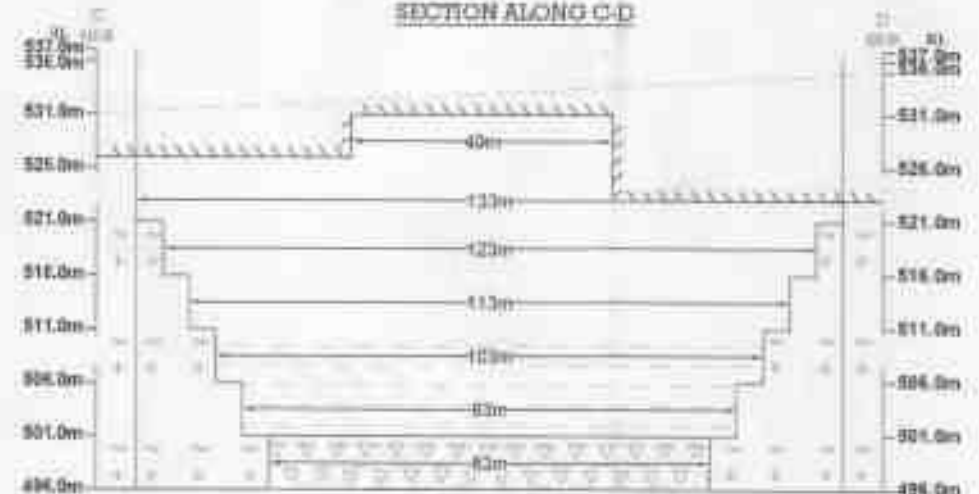
SECTION ALONG X-Y



SECTION ALONG A-B



SECTION ALONG C-D



PITTING RESOURCES							
Section	Depth (m)	Area (sq.m)	Volume (cu.m)	Volume (cu.m)	Volume (cu.m)	Volume (cu.m)	Volume (cu.m)
P-01	1.00	140.00	140.00	140.00	140.00	140.00	140.00
	1.00	140.00	140.00	140.00	140.00	140.00	140.00
	1.00	170.00	170.00	170.00	170.00	170.00	170.00
	1.00	171.00	171.00	171.00	171.00	171.00	171.00
	1.00	180.00	180.00	180.00	180.00	180.00	180.00
	1.00	181.00	181.00	181.00	181.00	181.00	181.00
	1.00	150.00	150.00	150.00	150.00	150.00	150.00
	1.00	151.00	151.00	151.00	151.00	151.00	151.00
	1.00	140.00	140.00	140.00	140.00	140.00	140.00
	1.00	175.00	175.00	175.00	175.00	175.00	175.00
TOTAL		1404.00	1404.00	1404.00	1404.00	1404.00	1404.00
P-02	1.00	130.00	130.00	130.00	130.00	130.00	130.00
	1.00	127.00	127.00	127.00	127.00	127.00	127.00
	1.00	127.00	127.00	127.00	127.00	127.00	127.00
	1.00	117.00	117.00	117.00	117.00	117.00	117.00
	1.00	107.00	107.00	107.00	107.00	107.00	107.00
	1.00	97.00	97.00	97.00	97.00	97.00	97.00
	1.00	87.00	87.00	87.00	87.00	87.00	87.00
	1.00	77.00	77.00	77.00	77.00	77.00	77.00
	1.00	97.00	97.00	97.00	97.00	97.00	97.00
	TOTAL		1094.00	1094.00	1094.00	1094.00	1094.00
TOTAL		2498.00	2498.00	2498.00	2498.00	2498.00	2498.00

TOTAL DEPTH = 41m

ULTIMATE PIT DIMENSION = 200.0m(L) X 136.0m(W)(Avg) X 41.0m(D)

INDEX

- Q.L. BOUNDARY
- 7.5m SAFETY DISTANCE
- GRAVEL
- ROUGH STONE
- QUARRY PIT
- ULTIMATE PIT SLOPE
- PROPOSED BACKFILLING AREA
- 425 ASED WATER STORAGE

LESSEE ADDRESS:

TMT.K.H.VDAYA,
W/o.D.MATHADANAGAN,
No.58 B GANDHI NAGAR,
KRISHNAGERI TOWN,
KRISHNAGERI DISTRICT- 631 001.

LOCATION OF QUARRY:

EXTENT : 4.00 Hk.
S.F.NO : 78/1B(PART),
VILLAGE : KOTHAPETTA,
TALUK : KRISHNAGERI,
DISTRICT : KRISHNAGERI.

PLATE NO: VII-A

DATE OF SURVEY: 02-11-2022

CONCEPTUAL & FINAL
MINI-COST ESTIMATIONS

SCALE: HOR-1:1000
VER-1:500

PREPARED BY:

1.10.2022
Srinivasan

Srinivasan
Srinivasan

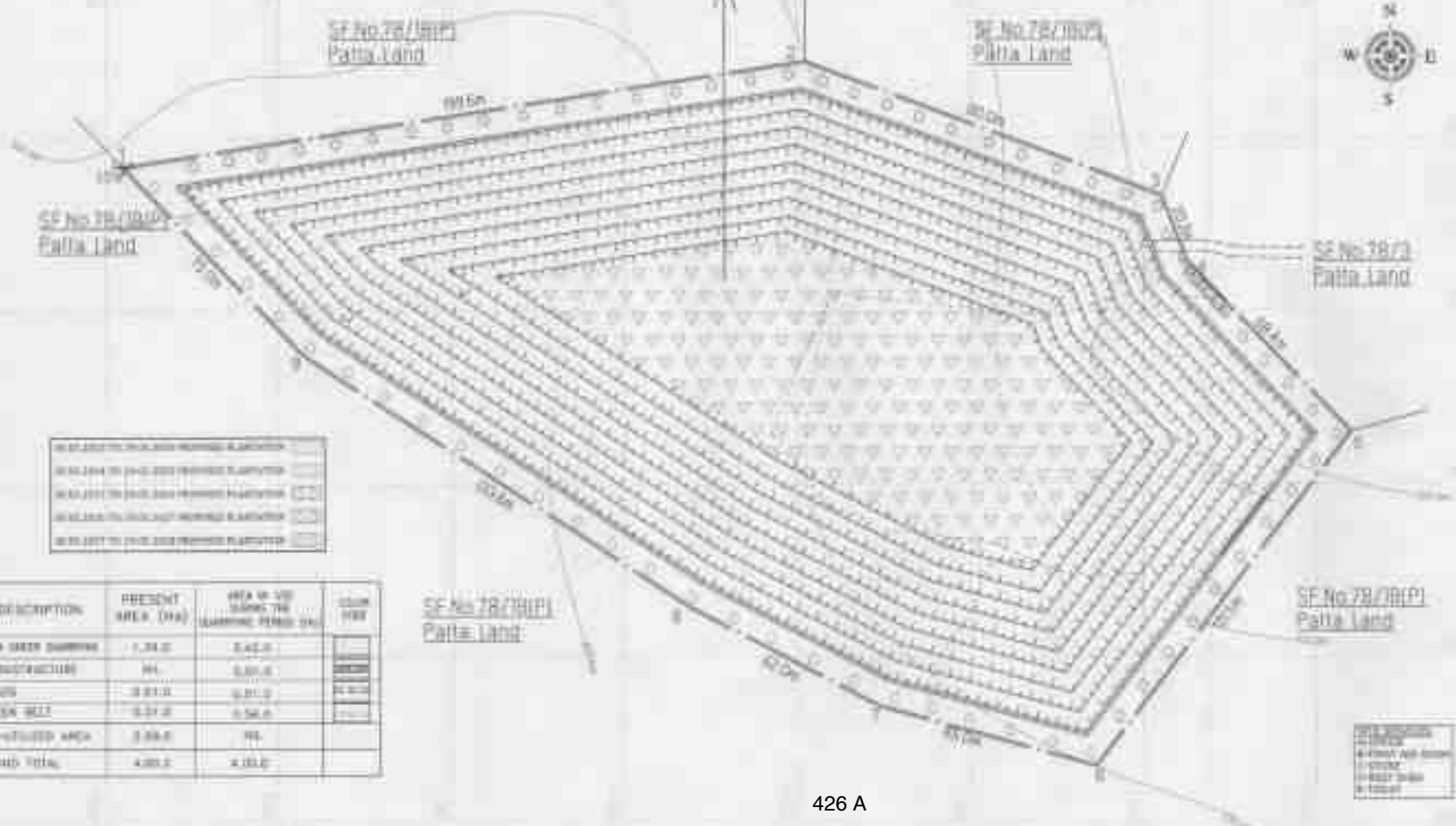
PROPOSED BACKFILLING WITH
(MINE WASTE)
= 340 DM(3) X 43 DM(1) X 4 DM(1)
= 30624 M³



PLATE NO. 100
DATE OF ISSUE: 27-04-2022

LEASER ADDRESS
TMT K.H.VENKA,
MULKOTHADACHANUR,
NO.58 W GANESH NAGAR,
KRISHNAGIRI TOWN,
KRISHNAGIRI DISTRICT - 576 002

LOCATION OF QUARRY
EXTENT : 4.00 S HA,
S.T.NO : 78/10/1A,
VILLAGE : SOHANAPETA,
TALUK : KRISHNAGIRI,
DISTRICT : KRISHNAGIRI



- AREA SUBJECT TO INFLUENCE OF MINING & QUARRYING
- AREA SUBJECT TO INFLUENCE OF MINING & QUARRYING
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- AREA SUBJECT TO INFLUENCE OF MINING & QUARRYING
- AREA SUBJECT TO INFLUENCE OF MINING & QUARRYING

DESCRIPTION	PRESENT AREA (HA)	AREA IN USE DURING THE OPERATIONAL PERIOD (HA)	COUM PER
AREA UNDER QUARRYING	1.34.0	0.40.0	
INFRASTRUCTURE	04	0.00.0	
ROADS	0.01.0	0.01.0	
CREEK BED	0.01.0	0.00.0	
UN-UTILISED AREA	0.00.0	00	
TOTAL TOTAL	4.00.0	0.40.0	

INDEX

S.L. BOUNDARY	
P.S.M SAFETY DISTANCE	
TEMPORARY BOUNDARY MARK	
CANAL	
REBAR STONE	
QUARRY PIT	
CONTOUR LINE	
QUARRY ROAD	
WIDE LAYOUT	
WIDENED BACKFILLING AREA	

SCALE: 1:1000

PREPARED BY:
M. S. RAO
M. S. RAO
M. S. RAO



75
Azadi Ka
Amrit Mahotsav

G20
भारत 2023 INDIA

 **LiFE**
Lifestyle for
Environment

भारतसरकार

GOVERNMENT OF INDIA

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय

MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE

Integrated Regional Office,

1st Floor, Additional Office Block for GPOA, Shastri Bhawan,
Haddows Road, Nungambakkam, Chennai – 600006



EP/12.1/2023-24/SEIAA/68/TN/966

09.08.2023

To

Tmt. K.M. Vijaya
W/o. Madhiazhagan,
No.58B Gandhi Nagar,
Krishnagiri Town and District – 635 001.

Subject: DEIAA – Application for Environmental Clearance for the proposed Rough Stone Quarrying over an extent of 4.00.0 Hectares in Patta land S.F.No.78/1B (Part) of Kothabetta Village of Krishnagiri Taluk and District preferred by Tmt.K.M. Vijaya, W/o. Madhiazhagan, No. 58B, Gandhi Nagar, Krishnagiri Town and District - issue of Environmental Clearance – Reg.


Reference No: Lr.No.34/DEIAA-KGI/ EC.No.26/2018 dated 27.02.2018.

Your Letter dated 19.07.2023.

Sir,

With reference to the above mentioned subject, please find enclosed herewith a Certified Copy of the Compliance Report. This has been approved by the DDGF(C) vide diary no. 567... dated 28.07.2023

Yours faithfully,


(Dr. C. Palpandi)
Scientist 'D'

Encl: As above.

Dr. C. Palpandi,
Scientist "D"
Government of India
Min. of Environment Forest and Climate Change
Integrated Regional Office
1st Floor, Additional Office Block for GPOA,
Shastri Bhawan, Haddows Road
Nungambakkam, Chennai - 600 006.

CERTIFIED COMPLIANCE REPORT

Subject: DEIAA – Application for Environmental Clearance for the proposed Rough Stone Quarrying over an extent of 4.00.0 Hectares in Patta land S.F.No.78/1B (Part) of Kothabetta Village of Krishnagiri Taluk and District preferred by Tmt.K.M. Vijaya, W/o. Madhiazhagan, No. 58B, Gandhi Nagar, Krishnagiri Town and District - issue of Environmental Clearance – Reg.

EC Ref. No: Lr.No.34/DEIAA-KGI/ EC.No.26/2018 dated 27.02.2018

Project Proponent: Tmt. K.M. Vijaya
W/o. Madhiazhagan,
No.58B Gandhi Nagar,
Krishnagiri Town and District.

Present Status of the Project:



The District Level Environment Impact Assessment Authority (DEIAA), Krishnagiri - Tamil Nadu was accorded Environmental Clearance (EC) to the Rough Stone Quarry of Tmt.K.M.Vijaya, Kothabetta Village, Krishnagiri Taluk and District. It is an open cast, semi-mechanized mining with an approved depth of mining of 71 m (25 meter above ground level and 46 meter below ground level). Now they had mined up to a depth of 12 meter. The present mining has not intersected the ground water table. The total Mine Lease (ML) Area is 4.00.0 Ha. Out of total ML area, broken-up area is 3.41.5 Ha. The project cost is Rs.30,30,000/-. EMP cost is Rs.3,70,000/-.

The quarry is not in operation. As informed by the Project Proponent, the mining work was stopped on 28th May 2023. The mine had valid lease from 30.05.2018 to 29.05.2023. Now, they had applied for renewal of EC with SEIAA – TN.

The Project Proponent (PP) has obtained Consent to Operate (CTO) for Air vide proceedings No.F.1682HSR/RS/DEE/TNPCB/HSR/A/2022 dated 22.08.2022 and Water vide proceeding No.F.1682HSR/RS/DEE/TNPCB/HSR/W/2022 dated 22.08.2022 from Tamil Nadu Pollution Control Board (TNPCB), Hosur and is valid up to **28.05.2023**.

The PP stated that, there is no habitation and approved layouts are situated within a radius of 300 meters from the lease area. However, the nearest village of Chinimalpalli situated at the distance of 0.77 km on the North-East side of the quarry lease area. The National Highway (NH- 48) Chennai - Mumbai road is situated about 1 km on the West side of the quarry lease area.

There is no reserve forest/social forest/wildlife sanctuary observed within 1 km radius of the quarry lease area. There is no major water bodies like river, lake, etc., within 500 m radius. There is no temple or any other archeological importance within the radius of 300 meters from the lease area. However, the Krishnagiri Fort is located at a distance of 0.51 km on South side of the quarry lease area. The Krishnagiri Reservoir Project (KRP) dam is located at a distance of 8.28 km in the south-western part of the quarry area.

Environmental monitoring was carried out in the core and buffer zone of the lease area by a NABL accredited laboratory. Ambient Air Quality (AAQ) was carried out at 3 locations in and around the quarry site and the results of all parameters are well within the prescribed limits of NAAQ Standards, 2009. Personal Exposure Monitoring (PEM) for free silica was carried out as per National Institute for Occupational Safety and Health (NIOSH) guidelines. Ambient Noise level monitoring and Work Place Noise Monitoring was carried out at 4 locations of the quarry site and the monitoring results are within prescribed limits as per MoEFCC/ CPCB norms. A Water sample was collected from a bore well near the quarry and analysed as per Indian Standard (IS). Results of all parameters are well within the permissible limits of IS: 10500:2012.

The Project Proponent has requested the Integrated Regional Office, Ministry of Environment, Forest & Climate Change (MoEF & CC), Chennai to provide Certified Compliance Report on Environmental Clearance towards applying for renewal of Environmental Clearance with the SEIAA-TN.

The above project was monitored on 25.07.2023 along with representative of the Project Proponent. The status of compliance on the stipulated conditions contained in the EC cited above is given below in Part III.

Date of Monitoring: **25.7.2023.**

PART – III

Environment Clearance Conditions:

Conditions to be Complied before Commencing Mining Operations:-

S. No.	EC Conditions	Status of Compliance
1.	The project proponent shall advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing the public that i. The project has been accorded Environmental Clearance.	Refer below. Advertisements were not given in two local Newspapers.

S. No.	EC Conditions	Status of Compliance
	ii. Copies of clearance letters are available with the Tamil Nadu Pollution Control Board. iii. Environmental Clearance may also be seen on the website of the State Level Environment Impact Assessment Authority. iv. The advertisement should be made within 7 days from the date of receipt of the clearance letter and a copy of the same shall be forwarded to the SEIAA.	
2.	The applicant has to obtain land use classification as industrial use before issue/renewal of mining lease.	Refer below. Before renewing the mining lease, the land use classification will be obtained as industrial use, PP informed.
3.	NOC from the Standing committee of the NBWL shall be obtained, if protected areas are located within 10 Km from the proposed project site.	Complied. During the visit, it was observed that there is no Environmental sensitive areas. Protected areas as per Wildlife Protection Act, 1972 (Tiger reserve, Elephant reserve, Biospheres, National parks, Wildlife sanctuaries, community reserves and conservation reserves) are available within 10 Km radius of the project site. Hence NBWL Clearance is not required.
4.	The project proponent shall comply the conditions laid down in the Section V, Rule 36 of Tamil Nadu Minor Minerals Concession Rules 1959.	Complied. The PP informed that the stipulated conditions laid down in Section V, Rule 36 of Tamil Nadu Minor Minerals Concession Rules 1959, Drilling, Blasting, Loading (at mines) and Transport are being complied.
5.	A copy of the Environmental Clearance letter shall be sent by the proponent to the concerned Panchayat, Town Panchayath/Panchayath union, Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also	Reportedly complied. The PP informed that a copy of the EC letter was submitted to local Panchayat. The PP also claimed that no suggestion / representation received from public and local NGO were received while processing the proposal.

S. No.	EC Conditions	Status of Compliance
	be put on the website of the proponent and also kept at the site, for the general public to see.	The EC letter was made available at the site for the general public to see. The EC letter was not uploaded on the website of the proponent.
6.	Quarry lease area should be demarcated on the ground with wire fencing to show the boundary of the lease area on all sides with red flags on every pillar shall be erected before commencement of quarrying.	<p>Complied.</p> <p>During the visit, it was observed that a wire fence is erected around the quarry lease area and red flags are mounted on each pillar on all sides to show the boundary of the lease area. The boundary pillars were erected at all corners of the lease area.</p> <p>Refer photos as Annexure – I.</p>
7.	The proponent shall ensure that First Aid Box is available at site.	<p>Complied.</p> <p>First Aid Box is available at the quarry area.</p> <p>Refer photos as Annexure – II.</p>
8.	The excavation activity shall not alter the natural drainage pattern of the area.	<p>Complied.</p> <p>No alteration of drainage pattern of the lease area was observed during the visit.</p>
9.	The excavated pit shall be restored by the project proponent for useful purposes. In this regard, the proponent shall deposit a sum of Rs. 5,00,000/- (Rupees Five Lakhs only) in the name of District Collector Krishnagiri in the form of fixed deposit. The said fixed deposit will be refunded after restoration of pit after end of the lease period.	<p>Agreed to comply.</p> <p>The PP has agreed to restore the excavated pit for useful purposes after completion of the project.</p>
10.	The proponent shall quarry and remove only in the permitted areas as per the approved Mining Plan details.	<p>Agreed to comply.</p> <p>The PP has removed Rough Stone and Gravel material in the permitted areas as per the approved Mining Plan.</p>
11.	The quarrying operation shall be restricted between 7AM and 5 PM.	<p>Complied.</p> <p>As informed by the PP that the quarry operations are being carried out between 7AM and 5 PM only. During the visit, no mining activity was carried out.</p>

S. No.	EC Conditions	Status of Compliance
12.	The proponent shall take necessary measures to ensure that there shall not be any adverse impacts due to quarrying operation on the nearby human habitations, by way of pollution to the environment.	<p>Complied</p> <p>There is no approved habitation near to the quarry. However, the nearest village of Chinimalpalli situated at the distance of 0.77 km on the North-East side of the quarry lease area.</p> <p>Also the PP informed that there is no adverse impact due to quarrying operations to the Environment.</p>
13.	A minimum distance of 15 mts. From any civil structure shall be kept from the periphery of any excavation area.	<p>Complied</p> <p>During the visit, it was observed that there is no civil structure located within 15 m distance from periphery of quarry.</p>
14.	Depth of quarrying shall be 2m above the ground water table /approved depth of mining whichever is lesser to be considered as a safe guard against Environmental Contamination and over exploitation of resources.	<p>Complied.</p> <p>The approved depth of the quarry is <u>71 m</u> above ground level (25 m above ground level and 46 m below ground level). As informed by the PP, the ground water table is <u>76 m</u> in rainy seasons and <u>82 m</u> in summer season at depth below ground level. At present the depth of mining activity is <u>12 m</u>, which is not intersected the ground water table. The PP assured that the quarrying will be done up to the approved depth of mining.</p> <p>However if required, we will obtain NOC for working below GW table from CGWA.</p>
15.	The mined out pits should be backfilled where warranted and area should be suitably landscaped to prevent environmental degradation. The mine closure plan as furnished in the proposal shall be strictly followed with back filling and tree plantation.	<p>Agreed to comply.</p> <p>Backfilling is not started and the PP has agreed to follow the backfilling as per the mine closure plan. Also have agreed to carryout landscaping and tree plantation after completion of the mining work.</p>
16.	Wet drilling method is to be adopted to control dust emissions. Delay detonators and shock tube initiation system for blasting shall be used so as to reduce vibration and dust.	<p>Complied.</p> <p>During the visit, no mining activity was carried out. Because of this, drilling and blasting activities were not observed.</p>

S. No.	EC Conditions	Status of Compliance
		However, the PP claimed that wet drilling method was adopted to control the dust emission. Milli second detonators are being used preferably 25-50 m per delay to control vibrations.
17.	Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities.	<p>Complied.</p> <p>The PP informed that the Drilling and Blasting were done with statutory mining personnel having competency certificate issued by the DGMS, Dhanbad. They carry out drilling and blasting in a safe and scientific manner as per DGMS guidelines.</p> <p>Refer as Annexure – III.</p>
18.	The explosives shall be stored at site as per the conditions stipulated in the permits issued by the licensing Authority.	<p>Complied.</p> <p>The PP informed that the explosive material is not stored at the site and it was taken from licensed agent as and when it is required and used immediately.</p> <p>Agreement for blasting had been made with M/s. VISHNU EXPLOSIVES having PESO license in holding No.E/SC/TN/22/732 (E104893).</p> <p>Refer as Annexure - IV.</p>
19.	Blasting shall be carried out after announcing to the public adequate through public address system to avoid any accident.	<p>Complied.</p> <p>The PP informed that blasting was carried out after announcing the public through public address system, centrist, whistling, siren and posting red flags to avoid any accident.</p>
20.	A study has to be conducted to assess the optimum blast parameters and blast design to keep the vibration limits less than prescribed levels and only such design and parameters should be implemented while blasting is done. Periodical monitoring of the vibration at specified location to be conducted and records kept for inspection.	<p>Agreed to comply.</p> <p>No such study has been conducted to assess the optimum blast parameters and blast design and details in this regard were not made available by the PP. PP has informed to conduct the study in future.</p> <p>However, the vibration levels are</p>

S. No.	EC Conditions	Status of Compliance
		monitored and the observed Peak Particle Velocity value is within the limit as per DGMS standards, i.e. 5.0 mm/sec.
21.	The Proponent shall take appropriate measures to ensure that the GLC shall comply with the revised NAAQ norms notified by MoEF, Gol on 16.11.2009. (GLC = Ground Level Concentration), (NAAQ = Noise and Ambient Air Quality)	Complied. AAQ levels were monitored by PP through NABL accredited laboratory to comply with the revised NAAQ norms. Test Reports are enclosed in Annexure – V.
22.	The following measures are to be implemented to reduce Air Pollution during transportation of mineral i. Roads shall be graded to mitigate the dust emission. ii. Water shall be sprinkled at regular interval on the main road and other service roads to suppress dust.	Complied. The following measures are implemented to reduce Air Pollution. i. Roads were graded to reduce the dust emissions. ii. Water sprinkling was carried out on the main road and other service roads regularly to suppress dust.
23.	The following measures are to be implemented to reduce Noise Pollution. i. Proper and regular maintenance of vehicles and other equipment. ii. Limiting time exposure of workers to excessive noise. iii. The workers employed shall be provided with protection equipment and earmuffs etc. iv. Speed of trucks entering or leaving the mine is to be limited to moderate speed of 25 kmph to prevent undue noise from empty trucks.	Complied. The following measures are implemented to reduce Noise Pollution. i. Proper maintenance of vehicle and other equipment's are carried out. ii. Limiting time exposure of workers to extensive noise. iii. Personnel Protective Equipment's (PPE) are provided to the workers. iv. Vehicles speed is restricted to 25kpmh.
24.	Measures should be taken to comply with the provisions laid under Noise Pollution (Regulation and Control) (Amendment) Rules, 2010, dt: 11.01.2010 issued by the MoE&F, Gol to control noise to the prescribed levels.	Complied. The PP informed that the inbuilt cabin facility in JCB is available. Ear plugs / muffs are provided for workers. The noise levels in the quarry area were monitored through NABL accredited laboratory and the values are within the limit. Report is enclosed in Annexure – VI.

S. No.	EC Conditions	Status of Compliance
25.	Suitable conservation measures to augment groundwater resources in the area shall be planned and implemented in consultation with Assistant Director, Ground Water Division, PWD, Dharmapuri.	Agreed to comply. The PP informed that the rain water is collected in the quarry pit during rainy season and used for Green Belt and Dust Suppression. This is helping to augment the ground water. However, they have not consulted RD, CGWB.
26.	Rain water harvesting to collect and utilize the entire water falling in land area should be provided by construction of a storage tank with a capacity of 5,00,000 liters and the rain water harvested in the entire quarry area should be stored in it and used for the quarry purpose like dust prevention, wet drilling, providing water for green belt etc.	Agreed to comply. The PP informed that the rain water is collected in the quarry pit during rainy season and allowed for percolation. PP agreed to construct the rain water storage tank with a capacity of 5,00,000 liters.
27.	Permission from the competent authority should be obtained for drawl of ground water, if any, required for this project.	Complied. As informed by the PP, the ground water table is 76 m in rainy seasons and 82 m in summer depth below ground level. Mining has been done up to 12 meters. There was no intersection of the ground water table.
28.	Topsoil, if any, shall be stacked properly with proper slope with adequate measures and should be used for plantation purpose.	Complied. As informed by the PP that whatever topsoil was removed the same was stacked and used for plantation purpose.
29.	The following measures are to be adopted to control erosion of dumps:- i. Retention/ toe walls shall be provided at the foot of the dumps. ii. Worked out slopes are to be stabilized by planting appropriate shrub/ grass species on the slopes.	Refer below. There is no Over Burden (OB) and because of this there is no OB dump. However reject materials are stored at identified place within ML area. The PP agreed to stabilize the worked out slopes by planting the appropriate species.
30.	Waste oils, used oils generated from the EM machines, mining operations, if any, shall be disposed as per the Hazardous Wastes (Management, Handling, and trans boundary movement) Rules, 2008 and its amendments thereof to the recyclers	Complied. As informed by PP the waste oil is collected, stored and disposed through TNPCB authorized recyclers.

S. No.	EC Conditions	Status of Compliance
	authorized by TNPCB.	
31.	Concealing the factual data or failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	<p>Agreed to comply.</p> <p>The PP has agreed to comply with this condition.</p>
32.	Rain water getting accumulated in the quarry floor shall not be discharged directly to the nearby stream or water body. If it is to be let into the nearby water body, it has to be discharged into a silt trap on the surface within the lease area and only the overflow after allowing settling of soil be let into the nearby waterways. The silt trap should be of sufficient dimensions to catch all the silt water being pumped out during one season. The silt trap should be cleaned of all the deposited silt at the end of the season and kept ready for taking care of the silt in the next season. Photographs of the silt trap should be furnished before commencing quarry operation.	<p>Agreed to comply.</p> <p>The PP informed that the rain water is collected in the quarry pit and used for dust suppression as well as for green belt development.</p> <p>No rain water is discharged directly to nearby stream or water body.</p>
33.	The lease holder shall undertake adequate safeguard measures during extraction of material and ensure that due to this activity, the hydro-geological regime of the surrounding area shall not be affected. Regular monitoring of ground water level and quality shall be carried out around the mine lease area during the mining operation. If at any stage, if it is observed that the groundwater table is getting depleted due to the mining activity; necessary corrective measures shall be carried out. The Assistant Director Ground water Division, PWD Dharmapuri shall monitor.	<p>Complied.</p> <p>The mining activity has no intersected the ground water level. In view of this, the PP informed that the hydro-geological regime of the surrounding area was not affected.</p> <p>Water Quality and Ground Water level was regularly monitored through third party NABL accredited laboratory and as per the report there is no adverse impact was noticed.</p> <p>The PP has assured that in case of any adverse impact is noticed, appropriate measures will be taken immediately.</p>

S. No.	EC Conditions	Status of Compliance
		The test report is enclosed in Annexure - VII.
34.	No tree-felling shall be done in the leased area, except only with the permission from competent Authority.	Complied. The PP informed that no tree was cut in the mining lease area.
35.	To take up environmental monitoring of the proposed quarry site before, during and after the mining activities including vibration study data, water, air & flora/fauna environment, slurry water generated/disposed and method of disposal, involving a reputed academic Institution and it should be monitored by the District Environmental Engineer, TNPCB, Hosur on yearly basis.	Complied. Environmental Monitoring was carried out before, during and after the mining activities through a third party NABL accredited laboratory. The monitored data shows that the values are within the limits. Vibration study, Flora and Faunal study were also conducted. The monitoring reports are given in Annexure – V, VI, VII & X.
36.	It shall be ensured that the total extent of nearby quarries(existing, abandoned and proposed) located within 500 meter radius from the periphery of this quarry is not exceeding 25 hectares within the mining lease period of this application.	Refer below. There are many quarries are located within 500 m radius from the periphery of this quarry and the total extent of the quarries is not exceeding 25 hectares. The Extent Certificate issued by Deputy Director, Department of Geology & Mines, Krishnagiri District was reviewed. Refer as Annexure – VIII.
37.	It shall be ensured that there is no habitation is located within 500 meter radius from the periphery of the quarry site and also ensure that no hindrance will be caused to the people of the habitation located within 500m radius from the periphery of the quarry site	Complied. It was observed that there is no human habitation within 300 m radius from the periphery of the quarry site as per the VAO certificate. The PP informed that no hindrance was occurred due to quarry activity and also agreed to ensure that no hindrance will be caused to the people of the habitation located within 500 m radius from the periphery of the quarry site. Refer Annexure – IX.
38.	Ground water quality monitoring should	Complied.

S. No.	EC Conditions	Status of Compliance
	be conducted once in 3 Months.	The PP informed that the monitoring of ground water quality and level are being carried out at one location through external laboratory on quarterly basis.
39.	Transportation of the quarried materials shall not cause any hindrance to the Village people/Existing Village road.	Complied. The PP informed that the transportation of the quarried material was reportedly carried out in the covered truck and there was no hindrance to the village people and road.
40.	Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI once in three months.	Agreed to comply. The PP informed that free silica test was conducted and report was submitted to TNPCB and Department of Geology and Mining and IRO, MoEF&CC, Chennai as informed by PP. The report is enclosed in Annexure - X.
41.	Air sampling at intersection point should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI periodically once in six months.	Complied. The PP has monitored the AAQ levels through NABL accredited laboratory to comply with the revised NAAQs norms. The report indicates that the AAQ levels are within the permissible limits.
42.	Bunds to be provided at the boundary of the project site and it should be properly maintained.	Complied. The PP has provided bunds at the boundary of the project site.
43.	The project proponent shall undertake plantation/afforestation work by planting the native species on all side of the lease area at the rate of 400/Ha. Suitable tall tree samplings should be planted on the bunds and other suitable areas in and around the work place.	Complied. The PP informed that the plantation activities are carried by planting the native species such as neem, Pungai, Coconut, Savukku tree etc., were planted around the quarry area during the mining operation. The PP Informed that more trees will be planted in future. Green belt Photos are enclosed in Annexure - XI.

S. No.	EC Conditions	Status of Compliance
44.	At least 10 Neem trees should be planted around the boundary of the quarry site.	Complied. During the visit, it was observed that they have planted more than 10 neem trees around the boundary of the quarry site.
45.	Floor of excavated pit to be leveled and sides to be sloped with gentle slope (Except for granite quarries) in the mine closure phase.	Agreed to comply. The PP has agreed to level the excavated pit and make gentle slope of the pit as per the mine closure plan.
46.	The Project Proponent shall ensure a minimum of 2.5% of the annual turnover will be utilized for the CSR Activity	Complied. The PP informed during the visit that an amount of Rs.15,200/- has been spent on CSR activities for Chinnamelpalli Govt. Higher School. Refer as Annexure – XII.
47.	The Project Proponent shall provide solar lighting system to the nearby villages.	Agreed to comply. During the site inspection, PP has agreed to provide the solar lighting system to the nearby villages.
48.	The Project Proponent shall comply with the mining and other relevant rules and regulations where ever applicable.	Agreed to comply. The PP informed that the mining and other relevant rules and regulations wherever applicable are being complied.
49.	Rainwater shall be pumped out Via Settling Tank only.	Complied. Rainwater is pumped out via settling tank.
50.	Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary shall be developed and maintained.	Complied. Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary was developed and maintained.
51.	As per MoEF&CC, Gol, Office Memorandum dated 30.03.2015, prior clearance from Forestry & Wild Life angle including clearance from obtaining committee of the National Board for Wild life as applicable shall be obtained before starting the	Agreed to comply. The PP informed during the visit that Clearance from forestry and wild life angle is not applicable to them due to following:

S. No.	EC Conditions	Status of Compliance
	quarrying operation, if the project site is located within 10KM from National Park and Sanctuaries.	<ul style="list-style-type: none"> • No forest land is involved in their lease area. • No wildlife sanctuary / critically polluted area / ecologically sensitive zone within 10km from the boundary of the ML area.
52.	The quarrying activity shall be stopped if the entire quantity indicated in the Mining plan is quarried even before the expiry of the quarry lease period and the same shall be monitored by the District Authorities.	<p>Agreed to comply.</p> <p>It was submitted that this condition is noted and assured to abide by this condition.</p>
53.	Safety equipments to be provided to all the employees.	<p>Complied.</p> <p>The PP has provided safety equipment's to all the employees during quarry operation.</p>
54.	Safety distance of 50m has to be provided in case of railway, reservoir, canal/odai.	<p>Agreed to comply.</p> <p>During the visit, it was observed that there is no railway line, reservoir, canal / odai within 50 m distance from the boundary of the lease area.</p>
55.	The Assistant / Deputy Director Department of Geology and Mining shall ensure that the proponent has engaged the blaster with valid Blasting license/certificate obtained from the competent authority before execution of mining lease.	<p>Complied.</p> <p>DGMS (Directorate General of Mines Safety) approved Mine's Manager and Mining Mate statutory personals are employed to carry over supervision of blasting operation.</p>
56.	The proponent shall furnish the Baseline data covering the Air, Water, Noise and land environment quality for the proposed quarry site before execution of mining lease.	<p>Complied.</p> <p>The PP has done the baseline study before execution mining operation.</p>
57.	The proponent shall erect the pillars in accordance with the Rules for depicting GPS details in earmarked boundary of the quarry site before execution of mining.	<p>Complied.</p> <p>During the visit, it was observed that pillars were erected according to the rules for depicting GPS details within the allotted boundary of the quarry site.</p>
58.	The proponent shall furnish the data obtained from the Public Works Department regarding the details of Ground Water table in the quarry site.	<p>Agreed to comply.</p> <p>It was submitted that this condition is noted and assured to abide by this condition.</p>

S. No.	EC Conditions	Status of Compliance
59.	The Proponent has to provide insurance protection to the workers in the case of existing mining or provide the affidavit in case of fresh lease before execution of mining lease.	<p>Complied.</p> <p>The Proponent has provided insurance protection to the workers.</p> <p>Refer as Annexure – XIII.</p>
60.	The proponent has to display the name board at the quarry site showing the details of Proponent, lease period, extent, etc., with respect to the existing activity before execution of mining.	<p>Complied.</p> <p>The Name board showing the details of the project was displayed on the front of the quarry site.</p> <p>Refer as Annexure - XIV</p>
61.	Heavy earth equipment's if utilized, after getting approval from the competent authority.	<p>Complied.</p> <p>The PP has obtained Heavy Earth Machinery (HEMM) permission from the Directorate General of Mines Safety.</p> <p>Refer as Annexure – XV.</p>
62.	The environmental norms shall be monitored by the District Environmental Engineer, Tamil Nādu pollution control board, Hosur.	<p>Agreed to comply.</p> <p>It was submitted that this condition is noted and assured to abide by this condition.</p>
63.	The assistant Director Public Works Department, Ground water Division Dharmapuri shall monitor whether the quarrying activity is carried out above the ground water level on yearly basis.	<p>Agreed to comply.</p> <p>It was submitted that this condition is noted and assured to abide by this condition.</p>
64.	NOC for sanitary certificate shall be obtained from the Deputy Director of Health Services, Krishnagiri.	<p>Agreed to comply.</p> <p>The PP has not obtained NoC for sanitary certificate from the Deputy Director of Health services, Salem.</p>
65.	Yearly medical examination of the quarry workers should be fitted with registered medical practitioner and the report should be filed in the quarry office in as separate file and copy should be sent to the Deputy Director, Health Services, Krishnagiri.	<p>Complied.</p> <p>Yearly medical examinations of the workers are being carried out and records are maintained.</p> <p>The PP agreed to send the copy of the records to the Deputy Director, Health Services, Krishnagiri.</p> <p>Refer as Annexure – XVI.</p>

S. No.	EC Conditions	Status of Compliance
66.	Closed circuit camera should be erected at the quarry site and the passage of vehicles in and out of the quarry should be recorded and the footage of recordings of the camera should be maintained and should be produced before the enforcing officials whenever called for.	Agreed to comply. Closed circuit camera was not erected at the quarry site.
67.	Vehicles used for transportation of quarried materials should be fitted with GPS and monitored	Agreed to comply. Vehicles used for transportation of quarried materials was not fitted with GPS and monitored
68.	Pit mouth register should be maintained in on line.	Complied. Pit mouth register is maintained in online.
69.	Auditor report on the annual turnover amount should be submitted to the District Collector within one month from the end of the financial year.	Agreed to comply. Auditor report on the annual turnover amount has not submitted to the District Collector.
70.	0.25% of the turn over amount should be utilized for the CSR activity after consultation with the District Collector.	Refer below. No information was provided.

GENERAL CONDITIONS:

S. No.	EC CONDITIONS	COMPLIANCE STATUS
1.	EC is given only on the factual records, documents and the commitment furnished in non-judicial stamp paper by the proponent.	Agreed to comply. It was submitted that this condition is noted and assured to abide by this condition.
2.	The Proponent shall obtain the Consent for Establishment from the TNPC Board before commencing the activity.	Refer below. The PP has not obtained Consent to Establishment (CTE) from TNPCB. However, the PP has obtained Consent to Operate (CTO) for Air vide proceedings No.F.1682HSR/RS/DEE/TNPCB/HSR/

S. No.	EC CONDITIONS	COMPLIANCE STATUS
		<p>A/2022 dated 22.08.2022 and Water vide proceeding No.F.1682HSR/RS/DEE/TNPCB/HSR/W/2022 dated 22.08.2022 from TNPCB, Hosur and is valid up to 28.05.2023.</p> <p>Enclosed CTO in Annexure – XVII.</p>
3.	No change in mining technology and scope of working should be made without prior approval of the SEIAA, Tamil Nadu.	<p>Complied.</p> <p>There is no change in mining technology and scope of working.</p>
4.	No change in the calendar plan including excavation, quantum of mineral (minor mineral) should be made.	<p>Complied.</p> <p>There is no change in the calendar plan including excavation & quantum of mineral (minor mineral) made.</p>
5.	Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	<p>Complied.</p> <p>The PP is carrying out the following pollution control measures.</p> <ul style="list-style-type: none"> • Water sprinkling carried out on haul roads at regular intervals by water sprinklers to control dust generation. • Periodic Monitoring of Ambient Air Quality (AAQ) and Noise level are being performed by a third party NABL accredited laboratory on half yearly basis. Monitoring Reports indicates that AAQ and Noise level are within the permissible limits.
6.	Effective safeguards shall be adopted against health risks on account of breeding of vectors in the water bodies created due to excavation of earth.	<p>Complied.</p> <p>There is no water body around this quarry. However the PP has taken vector controlled activities in the project area.</p>
7.	A berm shall be left from the boundary of adjoining field having a width equal to at least half the depth of proposed excavation.	<p>Complied.</p> <p>A berm haven been left from the boundary of adjoining field.</p>
8.	Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.	<p>Complied.</p> <p>No dust extraction system is provided in the mineral handling area. However, the PP is carrying out water sprinkling activities to control the dust levels in the project area.</p>

S. No.	EC CONDITIONS	COMPLIANCE STATUS
9.	Vehicular emissions shall be kept under control and be regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.	<p>Complied.</p> <p>The PP informed that all the vehicles used in the project area having valid Pollution under Control (PUC) certificates. Regular maintenance of vehicles are being carried out. Further, the PP informed that mineral loaded vehicles are covered with tarpaulin and not over loaded.</p> <p>Refer as Annexure – XVIII.</p>
10.	Access and haul roads to the quarrying area should be restored in a mutually agreeable manner where these are considered unnecessary after extraction has been completed.	<p>Agreed to comply.</p> <p>It was submitted that this condition is noted and assured to abide by this condition.</p>
11.	All Personnel shall be provided with protective respiratory devices including safety shoes, Masks, gloves etc. Supervisory people should be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	<p>Complied.</p> <p>The PP has provided PPE such as safety shoes, masks, and gloves etc., given to the employees.</p> <p>Supervisory people have been provided with adequate training on safety and health aspects.</p> <p>The occupational health surveillance has been undertaken periodically as per the DGMS norms to observe any contradictions due to dust exposure. No abnormalities have been reported.</p>
12.	Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly. The workers shall be provided with personnel protective measures such as masks, gloves, boots etc.	<p>Complied.</p> <p>Regular medical examination of the workers is being carried out and records are maintained. The health checkup is being carried out as per the schedule drawn by them.</p> <p>Refer as Annexure – XVI.</p>
13.	Workers/labourers shall be provided with facilities for drinking water and sanitation facility for Female and Male separately.	<p>Complied.</p> <p>The PP informed that workers were provided with safe drinking water and sanitation facilities for male and female separately.</p>

S. No.	EC CONDITIONS	COMPLIANCE STATUS
14.	The project proponent shall ensure that child labour is not employed in the project as per the sworn affidavit furnished.	Complied. No child labour is employed at the project site as per PP.
15.	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its Regional Office located at Chennai.	Agreed to comply. The PP has earmarked an amount Rs.3,70,000/- for Environmental management purposes and it is being incurred. There is no separate account, maintained. The PP has agreed to submit the year wise EMP expenditure to the Integrated Regional Office (IRO), MoEF&CC, Chennai in future.
16.	The Environmental Clearance does not absolve the applicant/ proponent of his obligation / requirement to obtain other statutory and administrative clearances from other statutory and administrative authorities.	Agreed to comply. It was submitted that this condition is noted and assured to abide by this condition.
17.	This Environmental Clearance does not imply that the other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would be considering the project on merits and be taking decisions independently of the Environmental Clearance	Agreed to comply. It was submitted that this condition is noted and assured to abide by this condition.
18.	The DEIAA, Krishnagiri may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.	Agreed to comply. It was submitted that this condition is noted and assured to abide by this condition.
19.	The DEIAA, Krishnagiri may cancel the environmental clearance granted to this project under the provisions of EIA Notification, 2006, at any stage of the validity of this environmental clearance, if it is found or if it comes to the knowledge of this DEIAA, Krishnagiri that the project proponent has deliberately concealed and/or submitted false or misleading	Agreed to comply. It was submitted that this condition is noted and assured to abide by this condition.

S. No.	EC CONDITIONS	COMPLIANCE STATUS
	information or inadequate data for obtaining the environmental clearance.	
20.	Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986	Agreed to comply. In general the PP implementing all the conditions given in the EC.
21.	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability Insurance Act, 1991, along with their amendments, draft Minor Mineral Conservation & Development Rules, 2010 framed under MMDR Act 1957, National Commission for protection of Child Right Rules, 2006 and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/Hon'ble High Court of Madras and any other Courts of Law relating to the subject matter.	Agreed to comply. The consents are valid up to 28.05.2023 . The PP stated that Public Liability Insurance Act, 1991, along with their amendments are complied. However, no details were made available regarding required insurance. Minor mineral conservation & development rules, 2010 framed under MMDR Act, 1957, National Commission for Protection of Child Right Rules, 2006 and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/Hon'ble High Court of Madras and any other courts of Law relating to the subject matter are also being complied as informed.
22.	Any other conditions stipulated by other Statutory/Government authorities shall be complied.	Agreed to comply. It was submitted that this condition is noted and assured to abide by this condition.
23.	Any appeal against this environmental clearance shall lie with the Hon'ble National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Complied. The PP informed that there is no appeal lying with National Green Tribunal (NGT) against this Environmental Clearance as on date.

This has the approval of the Competent Authority vide diary No. 567 dated 28.07.2023

C. Palpandi
(Dr. C. Palpandi)
Scientist 'D'

Dr. C. Palpandi,
Scientist "D"

Government of India
Min. of Environment Forest and Climate Change
Integrated Regional Office
1st Floor, Additional Office Block for GPOA,
Chavari Bazaar, Haddow Road

BOUNDARY PILLARS AND WIRE FENCING PHOTOS



PHOTOS OF FIRST AID BOX



Cert No. MR/52/0765



भारत सरकार/Government of India
खान अधिनियम, 1952/Mines Act, 1952
खनन परीक्षा बोर्ड/Board of Mining Examinations
खनन नेट सक्षमता प्रमाण-पत्र

MINING MATE'S CERTIFICATE OF COMPETENCY
(केवल ओपेनकास्ट खानों तक सीमित)
(Restricted to mines having opencast workings only)
(धात्विकीय खान विनियम, 1961 के अन्तर्गत)
(Under the Metalliferous Mines Regulations, 1961)

श्री जिनकी जन्म तिथि सुपुत्र है जो अपनी आयु, स्वस्थता, सदाचार, साक्षरता और धात्विकीय खानों में काम करने के विहित अनुभव का यथोचित प्रमाण प्रस्तुत करने एवं दिनांक को केन्द्र पर अर्पित विहित परीक्षा में उत्तीर्ण होने पर एतद्द्वारा केवल ओपेनकास्ट खानों तक सीमित नेट सक्षमता प्रमाण-पत्र प्रदान किया जाता है।

Shri T. ASHOK KUMAR son of S. THIRUNAVUKARASU
born on 20TH MAY, 1991 (NINETY ONE) having given satisfactory evidence of his app.
medical fitness, good character, literacy and prescribed experience of working in metalliferous
mines and having passed the prescribed examination held at GVTC, TRICHY
centre on 28.12.2016 is hereby granted MINING MATE'S CERTIFICATE OF
COMPETENCY restricted to mines having opencast workings only

बाएँ हाथ का निशान
Left hand thumb impression

अंचल सचिव
खनन परीक्षा बोर्ड
Zonal Secretary
Board of Mining
Examinations

[Handwritten signature]
अंचल सचिव
खनन परीक्षा बोर्ड
Zonal Secretary
Board of Mining Examinations

[Handwritten signature]
अध्यक्ष
खनन परीक्षा बोर्ड
Chairman
Board of Mining
Examinations

Signed and Sealed
Date 27/02/2017

APR 2022

MR

To

SRI T. ASHOK KUMAR

Sto. 5 THIRUVANUKAPESU

Home Address

Village

PO

TEACHERS COLONY

Police Station

District

DHARMAPURI

State

DHARMAPURI
TAMILNADU - 636701

உள்ளூர் புகார் எண் 19. 2022 மார்ச் மாதம் 26-நாள் அன்று
புகார் செய்துள்ள திரு. T. அஷோக் குமார் அவர்கள்
புகாரில் குறிப்பிட்டுள்ள விவரம் பற்றி ஆய்வு செய்து
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26-03-2022

1	On	2	On
3	On	4	On
5	On	6	On
7	On	8	On
9	On	10	On

Prepared by
Checked by





தமிழ்நாடு தமில்நாடு TAMIL NADU

50AB 650302

10.1.2019

மீ.சுவாமிநாதன்
புதித

B.N. MUNIRAJ
S.V.Lc: 7353/83
Krishnagiri, Tamilnadu

Deed of Agreement

This This agreement entered into at Kothapetta Village on the day of 12th December 2018. Between Sri Velava Minings (Occupier : C. Kirubashankaran), Door No.5/77F2, Rajaji Nagar, Mathalyankuttai, Mettur Taluk, Salem Dist, Tamilnadu. Pin - 636 401.

Herein after referred to as party of the first part. And

Leese Address:

Tmt K.M Vijaya Rough Stone Quarry

No. 58B, Gandhi Nagar,
Krishnagiri Town and Taluk

Site Address:

Lease Holder and Prop

Tmt K.M. Vijaya W/o Mathiahagan

Tmt K.M Vijaya Rough Stone Quarry

SF No.78/1B (Part),
Kothapetta Village,
KrishnagiriTk, Krishnagiri Dt.

Herein after referred to as party of the second part

Party of First

[Signature]

Party Of Second

[Signature]

Whereas, in the above terms First party and Second Part shall mean and include wherever the context so permits, their legal heir, successors, representatives, administrators and assigns etc.

Whereas the party of the second part has obtained Quarry Lease for carrying out Quarrying and Carrying away of minor minerals, referred in the Survey No. 78/1B (Part), Extent in 4.00.00 Hectares in Kothapetta Village in the Sub Registration Krishnagiri, Krishnagiri District from Government of Tamilnadu under lease agreement registered with the sub-registrar in Krishnagiri as Tmt K.M.Vjaya Rough Stone Quarry Lease Holder & Prop. Tmt K.M Vijaya w/o Mathiahagan,

Whereas the party of the second part having his own Mines Manager, Foreman and Blaster requires explosive materials for doing blasting in the said quarry. For possession of the explosive materials, a license under the Indian Explosives Act and Indian Explosive Rules, 2008 issued by the competent authority is necessary and the party of the first part is having a valid explosive License No. **E/SC/TN/22/732 (E104893)** issued by Joint Controller of Explosives, Chennai and Magazines at Survey No 737/1B, 737/2B Maniyathahalli Village, Purikal Post Nallampalli Police Station Dharmapuri District, Tamilnadu- 636 401 and they are authorized and entitles to make, supply and use of explosives for blasting rocks in Quarries.

The party of the second part approached the party of the first part to assist him in extraction of minor minerals from the said leased quarry by providing required explosive materials as and when required under the license issued to him by the competent authority and the party of the first part having agreed to do so.

The lease period of Five years starts from **30th of May 2018** and ends on the **29th May of 2023**

Now the agreement witness as follows:

1. It is agreed that the party of the first part shall supply explosives to the party of the second part, under his license for the blasting of rocks in the aforesaid licensed quarry, as per the provisions of Mines Act 1952.
2. The second party shall place the requirement of explosives and accessories, depending on the site requirements, holes drilled etc., and

Party of First



Partry Of Second



the explosives will be used by Competent Mining Personnel's / authority like Mines Managers, Mines Foreman, Mines Mate, Blaster etc. appointed by the owner as per the provisions of Mines Act 1952. After completion of the blasting operation by the competent personnel, left out or unused explosives will be returned to the magazine on the same day from where the supply was effected.

3. The party of the Second part is solely responsible for using the explosives and accessories in the leased area and Survey Nos. where mining lease has been obtained. The responsibility of the first party ceases once the explosives are delivered at the site. The Mine owner shall appoint competent Mining Personnel's for carrying out Mining & Quarrying operations including blasting operations in the quarry as per the provisions of the Mines Act 1952. The explosives will be used and handled by Mines Mate, Blaster, Mines Foreman and Mines Manager appointed by the Mine owner and all safety aspects will be scrupulously followed by the competent persons as per the provisions of the Mines Act 1952 and Explosives Rules 2008.
4. The party of the first part will charge GST, as per the GST act and the second party will pay the GST amount as per the bills. The bills will be settled promptly on fortnight basis by Ch, NEFT/RTGS, by the party of the second part as mutually agreed.
5. This agreement shall be in force until the expiry of the license of the first party from the date of this agreement and is subjected to renewal of such terms and conditions, as may be mutually agreed upon.

In witnesses the parties herein have set their hands to this agreement on this day month and year first mentioned above in the presence of the following,

Place: **Kothapetta** Village

Date 12.12.2018

Party of First 

Witness:

Party of Second 

- ① A. Jeyaraj M. Bhakaran
- ② Y. Shanmugam

आवकियों के लिए आवेदन पत्र (Application Form for Licenses)

License Application for carrying on the following business

आवकियों में (License No.) 12345678901234567890
आवकियों के लिए आवेदन पत्र (Application Form for Licenses)

स्वतंत्रता प्रस्ताविका
LICENCE ENDORSEMENT
अवकाश प्रमाणपत्र
Certificate of Experience



1. आवकियों के प्रकार (Type of License)

Mr. Velupillai Prabhakaran (October 1, 1952) C Road, Chankkayyap, 57722 (Tamil Nadu State, India) (MADRAS)
Dham, Thiruv. Village + Madhavaram, Dist. Thiruv. (MADRAS State, India) (MADRAS)

2. आवकियों के प्रकार (Type of License)

3. आवकियों के प्रकार (Type of License)

4. आवकियों के प्रकार (Type of License)

5. आवकियों के प्रकार (Type of License)

6. आवकियों के प्रकार (Type of License)

क्र. सं. (Sr. No.)	वस्तु का विवरण (Name and Description)	वर्ग (Class & Division)	उप-वर्ग (Sub-Division)	मात्रा (Quantity or Capacity)
1	Nitrate Mixtures	2.0	0	4250 Kg.
2	Detonating Fuse	6.2	0	35000 Mtrs
3	Ordinary Detonators	7.7	0	10000 Nos
4	Safety Fuse	6.1	4	15725 Mtrs
5	Electric Detonators	5.3	0	15000 Nos
6	Non-Electric Detonators	6.3	0	6000 Nos

7. आवकियों के प्रकार (Type of License)

8. आवकियों के प्रकार (Type of License)

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26. आवकियों के प्रकार (Type of License)

27. आवकियों के प्रकार (Type of License)



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S.F.No.92/3A2, Geetha Nagar,

Alagapuram Pudur,

Salem - 636 016, Tamil Nadu.

Phone: 0427 - 2970989 / +91 70944 53636

E-Mail: lab@glcs.in

Web: www.glcs.in

TEST REPORT

Report Number: GLCS/TR/3681/2022-23

Report Date: 18.09.2022

Issued To : Tmt.K.M.Vijaya, W/o.Madhiazhagan, No.58B Gandhi Nager, Krishnagiri Town and District.		Site Address: Rough Stone Quarry, Lease Area -4.00.0 Ha , S.F.No.78/1B (Part), Kothabetta Village, Krishnagiri Taluk, Krishnagiri District.	
Attention	-	Sampling Condition	Good - Active
Customer Ref.No.	TRF No : 1250	Sampled by	Laboratory
Sample Name	Air Quality Monitoring	Sampling Method	GLCS/SOP/AAQ/015
Sample Description	Ambient Air Quality	Sample Code	GLCS / 3681
Location Name	AAQ1- Core Zone (North West Corner of Quarry)	Date of Analysis	13.09.2022
Sampling Hours	08.45 am - 04.45pm	Date of Completion	18.09.2022
Sampling Date	12.09.2022	Avg Temperature	32.4°C
Sample Receipt Date	13.09.2022	Avg Humidity	63.9%
Discipline	Chemical	Group	Atmospheric Pollution

Sl. NO.	TEST PARAMETER	TEST METHOD	UNITS	RESULT	NAAQ (2009)* LIMITS
1	Particulate matter (Size less than 10 µm/PM ₁₀)	IS 5182 Part23:2007 (RA 2017)	µg/m ³	58.1	100
2	Particulate matter (Size less than 2.5 µm/PM _{2.5})	GLCS/SOP/AAQ/017	µg/m ³	23.2	60
3	Sulphur dioxide as SO ₂	IS 5182 Part2: 2001(RA 2007)	µg/m ³	BDL(DL:8.0)	80
4	Nitrogen dioxide as NO ₂	IS 5182 Part:6: 2007(RA 2007)	µg/m ³	15.3	80
5	Ozone as O ₃	GLCS/SOP/AAQ/002	µg/m ³	BDL(DL:5.0)	180
6	Ammonia as NH ₃	GLCS/SOP/AAQ/001	µg/m ³	BDL(DL:5.0)	400
7	Carbon Monoxide as CO	IS 5182 Part10:1999 (RA 2009)	mg/m ³	BDL(DL:1.0)	4.0
8	Lead as Pb	IS 5182 Part22:2004 (RA 2009)	µg/m ³	BDL(DL:0.01)	1.0
9	Benzene as C ₆ H ₆	IS 5182 Part11:2007	µg/m ³	BDL(DL:1.0)	5.0
10	Benzo(a)Pyrene as BaP	IS 5182 Part07:2004	ng/m ³	BDL(DL:0.1)	1.0
11	Arsenic as As	IS 5182 Part22:2004 (RA 2009)	ng/m ³	BDL(DL:1.0)	6.0
12	Nickel as Ni	IS 5182 Part22:2004 (RA 2009)	ng/m ³	BDL(DL:1.0)	20

Note: BDL- Below Detection Limit; DL- Detection Limit

* NAAQS - National Ambient Air Quality Standard Issued by CPCB (Central Pollution Control Board) in 2009.

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Verified

*****End of Report*****

Page 1 of 1

For Global Lab and Consultancy Services

Authorised Signatory
L. SUDHAPRIYA
Technical Manager

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BRANCH OFFICES: HOSUR (Mobile : 70944 54645) & COIMBATORE (Mobile : 70944 54646)



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Salem - 636 016. Tamil Nadu.

Phone: 0427 - 2970989 / +91 70944 53636

E-Mail: lab@glcs.in

Web: www.glcs.in

TEST REPORT

Report Number: GLCS/TR/3682/2022-23

Report Date: 18.09.2022

Issued To : Tmt.K.M.Vijaya, W/o.Madhiazhagan, No.58B Gandhi Nager, Krishnagiri Town and District.		Site Address: Rough Stone Quarry, Lease Area -4.00.0 Ha ,S.F.No.78/1B (Part), Kothabetta Village, Krishnagiri Taluk, Krishnagiri District.	
Attention	-	Sampling Condition	Good - Active
Customer Ref.No.	TRF No : 1250	Sampled by	Laboratory
Sample Name	Air Quality Monitoring	Sampling Method	GLCS/SOP/AAQ/015
Sample Description	Ambient Air Quality	Sample Code	GLCS / 3682
Location Name	AAQ2- Core Zone (South East Corner of Quarry)	Date of Analysis	13.09.2022
Sampling Hours	09.05 am - 05.05 pm	Date of Completion	18.09.2022
Sampling Date	12.09.2022	Avg Temperature	30.9°C
Sample Receipt Date	13.09.2022	Avg Humidity	64.2%
Discipline	Chemical	Group	Atmospheric Pollution

Sl. NO.	TEST PARAMETER	TEST METHOD	UNITS	RESULT	NAAQ (2009)* LIMITS
1	Particulate matter (Size less than 10 µm/PM ₁₀)	IS 5182 Part23:2007 (RA 2017)	µg/m ³	54.6	100
2	Particulate matter (Size less than 2.5 µm/PM _{2.5})	GLCS/SOP/AAQ/017	µg/m ³	22.8	60
3	Sulphur dioxide as SO ₂	IS 5182 Part2: 2001(RA 2007)	µg/m ³	BDL(DL:8.0)	80
4	Nitrogen dioxide as NO ₂	IS 5182 Part:6: 2007(RA 2007)	µg/m ³	15.3	80
5	Ozone as O ₃	GLCS/SOP/AAQ/002	µg/m ³	BDL(DL:5.0)	180
6	Ammonia as NH ₃	GLCS/SOP/AAQ/001	µg/m ³	BDL(DL:5.0)	400
7	Carbon Monoxide as CO	IS 5182 Part10:1999 (RA 2009)	mg/m ³	BDL(DL:1.0)	4.0
8	Lead as Pb	IS 5182 Part22:2004 (RA 2009)	µg/m ³	BDL(DL:0.01)	1.0
9	Benzene as C ₆ H ₆	IS 5182 Part11:2007	µg/m ³	BDL(DL:1.0)	5.0
10	Benzo(a)Pyrene as BaP	IS 5182 Part07:2004	ng/m ³	BDL(DL:0.1)	1.0
11	Arsenic as As	IS 5182 Part22:2004 (RA 2009)	ng/m ³	BDL(DL:1.0)	6.0
12	Nickel as Ni	IS 5182 Part22:2004 (RA 2009)	ng/m ³	BDL(DL:1.0)	20

Note: BDL- Below Detection Limit; DL- Detection Limit

* NAAQS - National Ambient Air Quality Standard Issued by CPCB (Central Pollution Control Board) in 2009.

For Global Lab and Consultancy Services

Prepared



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*****End of Report*****

Page 1 of 1

Authorised Signatory

L. SUDHAPRIYA
Technical Manager

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TEST REPORT

Report Number: GLCS/TR/3683/2022-23

Report Date: 18.09.2022

Issued To : Tmt.K.M.Vijaya, W/o.Madhiazhagan, No.58B Gandhi Nager, Krishnagiri Town and District.		Site Address: Rough Stone Quarry, Lease Area -4.00.0 Ha ,S.F.No.78/1B (Part), Kothabetta Village, Krishnagiri Taluk, Krishnagiri District.	
Attention	-	Sampling Condition	Good - Active
Customer Ref.No.	TRF No : 1250	Sampled by	Laboratory
Sample Name	Air Quality Monitoring	Sampling Method	GLCS/SOP/AAQ/015
Sample Description	Ambient Air Quality	Sample Code	GLCS / 3683
Location Name	AAQ3- Core Zone (North East Corner of Quarry)	Date of Analysis	13.09.2022
Sampling Hours	09.35 am - 05.35pm	Date of Completion	18.09.2022
Sampling Date	12.09.2022	Avg Temperature	31.1°C
Sample Receipt Date	13.09.2022	Avg Humidity	63.9%
Discipline	Chemical	Group	Atmospheric Pollution

Sl. NO.	TEST PARAMETER	TEST METHOD	UNITS	RESULT	NAAQ (2009)* LIMITS
1	Particulate matter (Size less than 10 µm/PM ₁₀)	IS 5182 Part23:2007 (RA 2017)	µg/m ³	51.7	100
2	Particulate matter (Size less than 2.5 µm/PM _{2.5})	GLCS/SOP/AAQ/017	µg/m ³	23.8	60
3	Sulphur dioxide as SO ₂	IS 5182 Part2: 2001(RA 2007)	µg/m ³	BDL(DL:8:0)	80
4	Nitrogen dioxide as NO ₂	IS 5182 Part:6: 2007(RA 2007)	µg/m ³	17.4	80
5	Ozone as O ₃	GLCS/SOP/AAQ/002	µg/m ³	BDL(DL:5.0)	180
6	Ammonia as NH ₃	GLCS/SOP/AAQ/001	µg/m ³	BDL(DL:5.0)	400
7	Carbon Monoxide as CO	IS 5182 Part10:1999 (RA 2009)	mg/m ³	BDL(DL:1.0)	4.0
8	Lead as Pb	IS 5182 Part22:2004 (RA 2009)	µg/m ³	BDL(DL:0.01)	1.0
9	Benzene as C ₆ H ₆	IS 5182 Part11:2007	µg/m ³	BDL(DL:1.0)	5.0
10	Benzo(a)Pyrene as BaP	IS 5182 Part07:2004	ng/m ³	BDL(DL:0.1)	1.0
11	Arsenic as As	IS 5182 Part22:2004 (RA 2009)	ng/m ³	BDL(DL:1.0)	6.0
12	Nickel as Ni	IS 5182 Part22:2004 (RA 2009)	ng/m ³	BDL(DL:1.0)	20

Note: BDL- Below Detection Limit; DL- Detection Limit

* NAAQS - National Ambient Air Quality Standard Issued by CPCB (Central Pollution Control Board) in 2009.

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*****End of Report*****

Page 1 of 1

For Global Lab and Consultancy Services

Authorised Signatory

L. SUDHAPRIYA
Technical Manager

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TEST REPORT

Report Number: GLCS/TR/3686/2022-23

Report Date: 18.09.2022

Issued To : Tmt.K.M.Vijaya, W/o.Madhiazhagan, No.58B Gandhi Nagar, Krishnagiri Town and District.		Site Address: Rough Stone Quarry, Lease Area -4.00.0 Ha ,S.F.No.78/1B (Part), Kothabetta Village, Krishnagiri Taluk, Krishnagiri District.	
Attention	-	Sampling condition	Good - Ambient
Customer Ref. No.	TRF No : 1250	Sampled by	Laboratory
Sample Name	Noise Level Monitoring	Sampling Method	GLCS/SOP/N/014
Sample description	Sound Pressure Level	Sample Code	GLCS / 3686-3689
Sampling Hours	11.30 am - 02.30 pm	Date of Analysis	13.09.2022
Sampling Date	12.09.2022	Date of Completion	18.09.2022
Sample Receipt Date	13.09.2022		

Sl. No.	Location	Results in dB (A)	
		Day time	
Ambient Noise Core Zone			
1	Southwest Corner of Quarry	59.5	
2	Northwest Corner of Quarry	58.8	
3	Northeast Corner of Quarry	55.3	
4	Southeast Corner of Quarry	51.8	
Limits as per The Noise Pollution (Regulation & Control) Rules, 2010 of MoEFCC / CPCB (Industrial)		Day Time : 75 dB (A)	
		Night Time : 70 dB (A)	

Note: MoEFCC - Ministry of Environment Forest and Climate Change;
CPCB - Central Pollution Control Board

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****End of Report****
Page 1 of 1

For Global Lab and Consultancy Services

Authorised Signatory
L. SUDHAPRIYA
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LABORATORY CONSULTANCY & SUSTAINABILITY

TEST REPORT

Report Number: GLCS/TR/3687/2022-23

Report Date: 18.09.2022

Issued To : Tmt.K.M.Vijaya, W/o.Madhiazhagan, No.58B Gandhi Nager, Krishnagiri Town and District.		Site Address: Rough Stone Quarry, Lease Area -4.00.0 Ha ,S.F.No.78/1B (Part), Kothabetta Village, Krishnagiri Taluk, Krishnagiri District.	
Attention	-	Sampling condition	Good - Ambient
Customer Ref. No.	TRF No : 1250	Sampled by	Laboratory
Sample Name	Noise Level Monitoring	Sampling Method	GLCS/SOP/N/014
Sample description	Work Place Noise	Sample Code	GLCS / 3690-3691
Sampling Hours	11.30 am - 02.30 pm	Date of Analysis	13.09.2022
Sampling Date	12.09.2022	Date of Completion	18.09.2022
Sample Receipt Date	13.09.2022		

Sl. No.	Location	Results in dB (A)
		Day time
1	Drilling Area - 1	73.8
2	Compressor Area	73.0
3	Excavator Operating Area	72.8
4	Tipper Operating Area	71.5
Limits as per The Noise Pollution (Regulation & Control) Rules, 2010 of MoEFCC / CPCB (Industrial)		Day Time : 75 dB (A)
		Night Time : 70 dB (A)

Note: MoEFCC - Ministry of Environment Forest and Climate Change;

CPCB - Central Pollution Control Board

For Global Lab and Consultancy Services

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****End of Report****

Page 1 of 1

Authorised Signatory

L. SUDHAPRIYA
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TEST REPORT

Report Number: GLCS/TR/3688/2022-23

Report Date: 18.09.2022

Issued To : Tmt.K.M.Vijaya, W/o.Madhiazhagan, No.58B Gandhi Nager, Krishnagiri Town and District.		Site Address: Rough Stone Quarry, Lease Area -4.00.0 Ha ,S.F.No.78/1B (Part), Kothabetta Village, Krishnagiri Taluk, Krishnagiri District.	
Attention	-	Sample Receipt Condition	Good - Active
Customer Ref No	TRF No : 1250	Sample Quantity	2 Litres
Sample Name	Borewell Water	Sampled by	Laboratory
Sample Description	Liquid	Sampling Method	GLCS/SOP/W/028
Sample Code	GLCS / 3692	Date of Analysis	13.09.2022
Sampling date	12.09.2022	Date of Completion	18.09.2022
Sample Receipt Date	13.09.2022	Group	Water
Discipline	Chemical		

Sl. No.	TEST PARAMETERS	TEST METHOD	UNIT	RESULTS	IS 10500:2012 Drinking Water	
					Acceptance Limit	Permissible Limit
1	Color	IS 3025 PART 4	Hazen	<5	5	15
2	Odor	IS 3025 PART 5	-	Agreeable	Agreeable	Agreeable
3	Taste	IS 3025 PART 7	-	Agreeable	Agreeable	Agreeable
4	pH	IS 3025 PART11	-	7.47	6.5 - 8.5	No Relaxation
5	Electrical Conductivity	IS 3025 PART14	µS/cm	749	-	-
6	Turbidity	IS 3025 PART10	NTU	<1	1	5
7	Total Dissolved Solids	IS 3025 PART16	mg/l	485	500	2000
8	Total Solids	IS 3025 PART15	mg/l	487	-	-
9	Total Suspended Solids	IS 3025 PART17	mg/l	<2	-	-
10	P. Alkalinity	IS 3025 PART 23	mg/l	Nil	-	-
11	Total Alkalinity	IS 3025 PART 23	mg/l	138	200	600
12	Total Hardness as CaCO ₃	IS 3025 PART 21	mg/l	121	200	600
13	Calcium as Ca	IS 3025 PART40	mg/l	26.2	75	200
14	Magnesium as Mg	IS 3025 PART 46	mg/l	13.4	30	100
15	Chloride as Cl	IS 3025 PART 32	mg/l	58.2	250	1000

For Global Lab and Consultancy Services

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Page 1 of 2

L. SUDHAPRIYA
Technical Manager

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BRANCH OFFICES: HOSUR (Mobile : 70944 54545) & COIMBATORE (Mobile : 70944 54646)

TEST REPORT

Report Number: GLCS/TR/3688/2022-23

Report Date: 18.09.2022

Sl. No.	TEST PARAMETERS	TEST MTHOD	UNIT	RESULTS	IS 10500:2012 Drinking Water	
					Acceptance Limit	Permissible Limit
16.	Sulphate as SO ₄ ²⁻	IS 3025 PART 24	mg/l	16.0	200	400
17.	Iron as Fe	IS 3025 PART 53	mg/l	BDL(DL:0.1)	0.3	No Relaxation
18.	Sodium as Na	IS 3025 PART 45	mg/l	42.8	-	-
19.	Potassium as K	IS 3025 PART 45	mg/l	11.0	-	-
20.	Acidity as CaCO ₃	IS 3025 PART 22	mg/l	NIL	-	-
21.	Ammoniacal Nitrogen as NH ₃ -N	IS 3025 Part 34	mg/l	BDL(DL:1)	0.5	No Relaxation
22.	Total Kjeldahl Nitrogen	IS 3025 Part 34	mg/l	BDL(DL:2)	-	-
23.	Boron as B	IS 3025 Part 57	mg/l	BDL(DL:0.01)	0.5	1
24.	Free Residual Chlorine as Cl ₂	IS 3025 PART 26	mg/l	BDL(DL:1)	1	1.5
25.	Fluoride as F	GLCS/SOP/W/015	mg/l	0.28	1	1.5
26.	Silica as Si	IS 3025 PART 35	mg/l	9.3	-	-
27.	Free Carbon Dioxide CO ₂	IS 3025 Part 61	mg/l	BDL(DL:1)	-	-
28.	Manganese as Mn	IS 3025 Part 59	mg/l	BDL(DL:0.1)	0.1	0.3
29.	Phosphate as PO ₄	IS 3025 PART 31	mg/l	BDL (DL:0.1)	--	--
30.	Carbonate	IS 3025 Part 51	mg/l	Nil	-	-
31.	Bicarbonate	IS 3025 Part 51	mg/l	138	-	-
32.	Nitrate as NO ₃	IS 3025 Part 34	mg/l	BDL (DL:2)	45	No Relaxation
33.	*Escherichia Coli	IS 1622 : 1981	MPN/100ml	Absent	Should be Absent	
34.	*Coliform Bacteria	IS 1622 : 1981	MPN/100ml	Absent		

Note:BDL- Below Detection Limit, DL- Detection Limit, MPN – Most probable number

*These Parameters were Sub –Contracted to MoEF Laboratory


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Verified

*****End of Report*****

Page 2 of 2

For Global Lab and Consultancy Services


Authorised Signatory
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Technical Manager

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From

Dr. S.Vediappan, M.Sc.,Ph.d.,
Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

To

Tmt. K.M. Vijaya,
W/o. D. Madhiazhagan,
D.No. 58B, Gandhi Nagar,
Krishnagiri Town,
Krishnagiri District - 635 001.

Roc.No.1120/2020/Mines Dated: 09.02.2023

Sir,

Sub: Mines and Minerals - Rough stone - Krishnagiri District - Krishnagiri Taluk - Kothapetta Village-patta land in S.F.No. 78/1B(P) Over an extent of 4.00.00 Hects - Quarry lease granted to Tmt. K.M. Vijaya - Scheme of mining submitted - approved - Other quarry situated in 500 mtrs radial distance - Details furnished - reg.

Ref:

1. The District Collector, Krishnagiri Proc.Roc.No.419/2017/ Mines Dated: 30.05.2018.
2. Mining Plan approved by the Deputy Director of Geology and Mining, Krishnagiri in Rc.no. 419/2017/Mines dated: 29.12.2017.
3. Assistant Director Geology and Mining, Krishnagiri Proc. Rc.no. 1120/2020/mines dated: 26.04.2021.
4. 1st Scheme of Mining plan approved by Deputy Director of Geology and Mining, Krishnagiri in Rc.no. 1120/2020/Mines dated: 27.01.2023.
5. Tmt. K.M. Vijaya, Gandhi Nagar, Krishnagiri letter dated: 09.02.2023.

Kind attention is invited to the references cited above.

2. A quarry lease had been granted in favour of Tmt. K.M. Vijaya, to quarry Rough stone for a period of 10 years over an extent of 4.00.00 hecets of Patta land in S.F.No. 78/1B(P) of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District vide the District Collector, Krishnagiri Proc.Roc.No.419/2017/Mines dated: 30.05.2018 and Assistant Director Geology and Mining Proc. Rc.No. 1120/2020/Mines dated: 26.04.2021 under TNMMCR Rules 1959. The lease deed has been executed on 30.05.2018 and the lease period is valid upto 29.05.2028.

3. The Mining plan for the subject Rough stone quarry was approved by the Deputy Director of Geology and Mining, vide letter Rc. No. 419/2017/Mines Dated: 29.12.2017.

4. The lessee has submitted 1st Scheme of mining for the 2nd five years which was approved by the Deputy Director of Geology and Mining, Krishnagiri vide letter dated: 27.01.2023.

5. In this connection, the details of quarries situated within 500mts and Pit dimension of existing Pit and Permit taken details for the subject quarry requested by the lessee vide letter dated: 09.02.2023 to furnish the same before SELAA in orders to get Environmental Clearance

I. Details of Existing quarries.

Sl No	Name of the lessee	Village & Taluk	Mineral	S.F No.	Extent in Het	GO No. & Date	Lease period.
1.	Tmt. K.M. Vijaya, W/o. D. Madhiazhagan, D.No. 58B, Gandhi Nagar, Krishnagiri Town, Krishnagiri	Krishnagiri, Kothapetta	Rough Stone	78/1B(P)	4.00.00	Rc.No. 419/2017/ Mines dated 30.05.2018	31.05.2018 to 30.05.2028 Instant Proposal (proposed for 2 nd five year)
2.	M/S, Devarajaa M.Sand, No. 58 B Gandhi Nagar, Krishnagiri	Krishnagiri, Kothapetta	Rough Stone	78/1A(P) & 78/1B(P)	4.00.00	Rc.No. 418/2018/ Mines dated 30.05.2018	31.05.2018 to 30.05.2028
3.	M/s. Ma Quality stone, 58B Gandhi Nagar	Krishnagiri, Kothapetta	Rough Stone	87/1B2(P)	3.70.00	Rc.No. 1179/2020 mines date: 23.11.2022	23.11.2022 to 22.11.2032

II. Details of abandoned/Old quarries.


Sl No	Name of the lessee	Village & Taluk	Mineral	S.F No.	Extent in Het	GO No. & Date	Lease period.
1.	Thiru. Ganesan	Krishnagiri, Kothapetta	Rough Stone	56/1(P-D)	2.54.00	Rc.No. 611/2009/ Mines dated 14.05.2015	14.05.2015 to 13.05.2020
2.	Tmt. Sa. Sumitha Shankar, W/o Shankar Raj, 252, Metbanda Village, Venkatapur am Panchayat, Krishnagiri Post Taluk & Dit.	Krishnagiri, Kothapetta	Rough Stone	56/1 (P-5)	1.20.00	Rc.No. 49/2016/ Mines dated 18.08.2016	1.09.2016 to 31.08.2021

09/19/23

3.	Tmt. Qummurunnisa	Krishnagiri, Kothapetta	Rough Stone	87/1B1(P) & 87/1B2(P)	4.75.00	Re.No. 08/2023/ mines date: 05.02.2016	02.03.2016 to 01.06.2021
4.	Thiru. A. Madesh	Krishnagiri, Kothapetta	Rough Stone	56/1(P-C)	3.06.00	Re.No. 126/2010/ mines date: 27.10.2009	03.05.2010 to 02.05.2015

III. Details of Proposed quarries

Sl No	Name of the lessee	Village & Taluk	Mineral	S.F No.	Extent in Het	GO No.& Date	Lease period.
				----- Nil -----			


Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

Copy to :-

- The Chairman,
Tamil Nadu State Environment
Impact Assessment Authority,
3rd Floor, Panakal Maligai,
No. 1 Jeenes Road, Saidapet,
Chennai -15.


14/2/23

TMT. K.M. VIJAYA, Rough stone quarry in the S.F.No.78/1B(P) over an extent of 4.00.0 ha. in Kothapetta Village, Krishnagiri Taluk, Krishnagiri District.

GENERAL VIEW OF THE LEASE AREA



(Deponent)

[Handwritten Signature]
village Administrative Officer
71, KRISHNAGIRI
KRISHNAGIRI.

TEST REPORT

Report Number: GLCS/TR/3684/2022-23

Report Date: 18.09.2022

Issued To : Tmt.K.M.Vijaya, W/o.Madhiazhagan, No.58B Gandhi Nager, Krishnagiri Town and District.		Site Address: Rough Stone Quarry, Lease Area -4.00.0 Ha ,S.F.No.78/1B (Part), Kothabetta Village, Krishnagiri Taluk, Krishnagiri District.	
Attention	-	Sampling Condition	Good - Active
Customer Ref.No.	TRF No : 1250	Sampled by	Laboratory
Sample Name	Air Quality Monitoring	Sampling Method	GLCS/SOP/PEM/022
Sample Description	Personal Exposure Monitoring	Sample Code	GLCS / 3684
Location Name	Drilling Area & Driller operator cabin	Date of Analysis	13.09.2022
Sampling Hours	09.15 am - 05.15 pm	Date of Completion	18.09.2022
Sampling Date	12.09.2022	Avg Temperature	32.1°C
Sample Receipt Date	13.09.2022	Avg Humidity	63.6%
Discipline	Chemical	Group	Atmospheric Pollution

Sl. NO.	TEST PARAMETER	TEST METHOD	UNITS	RESULT
1	Respirable Dust	GLCS/SOP/PEM/022	mg/m ³	0.34
2	Free Silica	GLCS/SOP/PEM/023	mg/m ³	BDL (DL 0.05)

BDL - Below Detection Limit , DL - Detection Limit

For Global Lab and Consultancy Services


Prepared


Verified


Authorised Signatory
L. SUDHAPRIYA
Technical Manager

*****End of Report*****

Page 1 of 1

Note: The test results are only to the sample submitted for test. Any Correction of the test report on full or part shall invalidate the report. Samples are not drawn by us unless otherwise stated. Sample will be retained for 14 days from the date of reporting except in case of regulatory samples or specifically instructed by client. Perishable samples will be discarded immediately after reporting. We do not accept any liability with regard to origin or source from which the samples are extracted. The Laboratory is not responsible for authenticity of photocopied test reports. Any holder of this report is advised that information contained hereon reflects the laboratory's finding at the time of its intervention only and within the limits of client instructions. The authenticity of the test report issued by us can be verified by submitting an e-mail request with report number and report date along with report copy.



GLOBAL LAB AND CONSULTANCY SERVICES

(An ISO 17025:2017 / NABL accredited & FSSAI notified Laboratory)

S.F.No.92/3A2, Geetha Nagar,

Alagapuram Pudur,

Salem - 636 016, Tamil Nadu.

Phone: 0427 - 2970989 / +91 70944 53636

E-Mail: lab@glcs.in

Web: www.glcs.in

LABORATORY | CONSULTANCY | SUSTAINABILITY

TEST REPORT

Report Number: GLCS/TR/3685/2022-23

Report Date: 18.09.2022

Issued To : Tmt.K.M.Vijaya, W/o.Madhiazhagan, No.58B Gandhi Nager, Krishnagiri Town and District.		Site Address: Rough Stone Quarry, Lease Area -4.00.0 Ha ,S.F.No.78/1B (Part), Kothabetta Village, Krishnagiri Taluk, Krishnagiri District.	
Attention	-	Sampling Condition	Good - Active
Customer Ref.No.	TRF No : 1250	Sampled by	Laboratory
Sample Name	Air Quality Monitoring.	Sampling Method	GLCS/SOP/PEM/022
Sample Description	Personal Exposure Monitoring	Sample Code	GLCS / 3685
Location Name	Loading area &Excavator operator cabin	Date of Analysis	13.09.2022
Sampling Hours	09.20 am - 05.20 pm	Date of Completion	18.09.2022
Sampling Date	12.09.2022	Avg Temperature	31.2°C
Sample Receipt Date	13.09.2022	Avg Humidity	63.6%
Discipline	Chemical	Group	Atmospheric Pollution

Sl. NO.	TEST PARAMETER	TEST METHOD	UNITS	RESULT
1	Respirable Dust	GLCS/SOP/PEM/022	mg/m ³	0.27
2	Free Silica	GLCS/SOP/PEM/023	mg/m ³	BDL (DL 0.05)

BDL - Below Detection Limit , DL - Detection Limit

For Global Lab and Consultancy Services

Prepared



Verified

Authorised Signatory
L. SUDHAPRIYA
Technical Manager

*****End of Report*****

Page 1 of 1

Note: The test results are only to the sample submitted for test. Any Correction of the test report on full or part shall invalidate the report. Samples are not drawn by us unless otherwise stated. Sample will be retained for 14 days from the date of reporting except in case of regulatory samples or specifically instructed by client. Perishable samples will be discarded immediately after reporting. We do not accept any liability with regard to origin or source from which the samples are extracted. The Laboratory is not responsible for authenticity of photocopied test reports. Any holder of this report is advised that information contained hereon reflects the laboratory's finding at the time of its intervention only and within the limits of client instructions. The authenticity of the test report's issued by us can be verified by submitting an E-mail request with report number and report date along with report copy.

BRANCH OFFICES: HOSUR (Mobile : 70944 54645) & COIMBATORE (Mobile : 70944 54646)

GREEN BELT PHOTOS



CSR ACTIVITIES FOR CHINNAMPELLI GOVT. HIGHER SCHOOL





Sub-Regional Office
EMPLOYEES' STATE INSURANCE CORPORATION
ESI Corporation, 39/57, Three Roads, Salem

C-11 Regd. with a.d.

To
M/s.SRI DEVARAJIA M SAND
Sf No 78/1a, 78/1b,78/2,78/3
Kothapetta
Kothapetta,635001

Dated : 31/1/2022

Subject:- Implementation of the E.S.I. Act, 1948 and Registration of Employees of the Factories and Establishments under Section 2(12) of the Act, as amended.

Dear Sir(s),

1. It is informed that under section 1(3) of the esi. act, 1948 is applicable to all factories/establishments covered under the act within the area where your factory/establishment is situated
2. It is further informed that the appropriate government has extended the provisions of the act to other establishments under section 1(5) of the act in this area
3. Under section 2 a of the act such a factory/establishment is required to register itself under the act and chapter iv thereof casts a responsibility on the principal employer thereof to get his employees registered and pay contributions in respect of these employees covered under the act.
4. On the basis of the particulars in respect of your factory/establishment submitted by you, the report of the inspection conducted by the Social Security Officer, who inspected your factory on -NA-, your factory falls within the purview of Section 2(12) of the Act with effect from 01-12-2021. In case, however, subsequent facts reveal that your factory was coverable from a date prior to the date mentioned above, you shall make yourself liable to comply with the provisions of the Act from such earlier date.
5. It is requested to take immediate steps for registration of your employees by submitting declaration forms online, payment of contribution, maintenance of records etc. from the date of coverage of your factory/establishment under the act. **You are also requested to submit employer's registration form (form 01) as required under the provisions of sec.2-a of the esi act , 1948 read with regulation 10-b of the esi(general), regulations, 1950.
6. For the sake of convenience your establishment has been allotted code No **63001052950000499** which may kindly be used in all communications sent to this office and on all forms at the place indicated for the purpose. The Branch Office of the Corporation situated at **ESI Hospital Complex, SIPCOT,Hosur 635126** has been instructed to render necessary assistance to you in connection with registration of your employees. In case you find any difficulty or for any other purpose which may be necessary in connection with the Scheme you are requested to contact the Manager of the above Branch Office who will render necessary help in the matter.
7. A State wise list of ESI Dispensaries is available on our website www.esic.nic.in under the link Directories which can be downloaded. It is requested that publicity may be given about the Employees' State Insurance Dispensaries to enable your employees to choose their E.S.I. Dispensaries

8. The corporation officials would be pleased to give all necessary and possible guidance to you in discharging your duties and obligations under the esi act, 1948 and I am confident of prompt and timely compliance under the provisions of the ESI act and regulations on your part.

9. All the Branches of State Bank of India are authorized to accept the ESI Contribution.

10. The brochures/leaflets containing benefits available under the scheme and obligation of the employer etc are available on our website www.esic.nic.in under the link Publications which may be downloaded for wide publicity for the smooth functioning of the scheme

11. Please indicate your code no. on all correspondences to avoid delay

Yours faithfully,

Asstt./Dy. Director

Encl. : As state above

Copy for information and necessary action to:

Name of the principal employer : DEVARAJ MATHIAZHAGAN

No. of employees : 20

ENSURE - TO INSURE ALL ELIGIBLE WORKERS WITH ESI FOR TOTAL SOCIAL SECURITY

PHOTOS OF NAME BOARD





भारत सरकार / GOVERNMENT OF INDIA
 श्रम एवं रोजगार विभाग / MINISTRY OF LABOUR & EMPLOYMENT
 खाण सुरक्षा महानिदेशालय / DIRECTORATE GENERAL OF MINES SAFETY
 दक्षिण क्षेत्र, बंगलूरु / SOUTHERN ZONE, BANGALURU



E-Mail : dg@dgmil.gov.in

☎ 080-25535871-74 FAX: 080-25535873

No.7th Floor, Sri Venkateswara Kendriya
 Bhavan, Bommalur, Bangalore- 560073

सं. SZ/809/WH/146/106(2)(b)/P-256/19-20 / 406

दिनांक: 26/11/2019

प्रति,

खाण सुरक्षा निदेशक,
 बंगलूरु क्षेत्र, बंगलूरु।

म्हारे,

Shri D.Mathiazhagan,
 Partner: Sri Devaraajaa 'M' Sand Rough Stone Mine,
 Mys.Mrs Sri Devaraajaa 'M' Sand,
 58-B, Gandhi Nagar, Krishnagiri - 635 001.

विषय:- Conditions governing the use of Heavy Earth Moving Machinery (HEMM) without deep hole drilling and blasting under Reg.106(2)(b) of the MMR, 1961, at Sri Devaraajaa 'M' Sand Rough Stone Mine (SF No.78/1A Part, 78/1B Part) of M/s Sri Devaraajaa 'M' Sand (Partner: Shri D.Mathiazhagan) at Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamilnadu.

महोदय,

Please refer to your application submitted vide No.Devaraajaa M Sand/2019/02 dated 01.02.2019 and subsequent correspondence resting with letter No.Devaraajaa M Sand/2019/04 dated 01.02.2019 on the above subject along with surface Plan No.Nil dated 28/11/2018 and updated Surface Plan vide No.SRI DEVA/04/2019-20 dated 25.03.2019 enclosed therewith.

The matter has since been examined in the light of what has been stated in your application. In exercise of the powers conferred on the Chief Inspector of Mines (also designated as Director-General of Mines Safety) under the provisions of clause (2)(b) of Regulation 106 of the Metalliferous Mines Regulations, 1961 and by virtue of the authorization granted to me by the Chief Inspector of Mines (also designated as Director-General of Mines Safety) under Section 6(1) of the Mines Act, 1952, I hereby specify following conditions governing use of Heavy Earth Moving Machinery(HEMM) **without deep hole drilling and blasting** under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961 to form benches in overburden & ore-body Sri Devaraajaa 'M' Sand Rough Stone Mine (SF No.78/1A Part, 78/1B Part) of M/s Sri Devaraajaa 'M' Sand (Partner: Shri D.Mathiazhagan) at Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamilnadu.

FORM 'O'

(Refer rules 29 - F (2) and 29 - L)

REPORT OF MEDICAL EXAMINATION UNDER RULE 29- B

(To be Issued in triplicate)

Certificate No.

Certified that Shri PARSHURAM .T employed as Mine Mate in S.M. Vijaya Rough Stone Quarry mine. For D. No. has been examined for an initial / periodical medical examination. He appears to be 39 years of age. The findings of the examining authority are given in the attached sheet. It is considered that Shri PARSHURAM.T

- a) Is medically fit for any employment in mines.
- b) Is suffering from _____ and is medically unfit for
- Any employment in mines ; or
 - Any employment below ground ; or
 - Any employment or work _____
- c) Is suffering from _____ and should get this disability cured / controlled and should be again examined within a period of _____ months. He will appear for re-examination with the result of test of test of _____ and the opinion of _____ he may be permitted / not permitted to carry on his duties during this period.



Signature of examination authority

[Signature]
 Dr. M. Selvaraj, M.B.B.S., D.O.
 Senior Assistant Surgeon
 Reg. No: 64284
 GOVT. HQRS. HOSPITAL
 KRISHNAGIRI-635 003.
 Name and Designation
 In block letters

Place: KRISHNAGIRI

Date: 01.04.2019

REPORT OF THE EXAMINING AUTHORITY

(To be filled in every medical examination whether initial or periodical or re-examination or after cure / control of disability)

Annexure to certificate No 7 as a result of medical examination on 01.04.2019

Identification mark

a) Scar on left hand

Parshuram.T

Left thumb impression of the candidate
Good / Fair / Poor

1. General development

2. Height 174 Cms

3. Weight 79 Kg

4. Eyes:

i. Visual acuity - Distant vision (with or without glasses)

Right eye Normal

Left eye Normal

ii. Any organic disease of eyes NIL

iii. Night blindness NIL

iv. Colour blindness NIL

v. Squint NIL

(To be tested in special cases)

5. Ears:

i. Hearing right ear Normal Left ear Normal

ii. Any organic disease NIL

6. Respiration system:

Chest measurement 85/89

i. After full inspiration 85 cms.

ii. After full expiration 89 cms.

RENEWAL OF CONSENT ORDER NO:2209246836543

DATE:22/08/2022


 Digitally signed by
 District Environmental Engineer

PROCEEDINGS NO.F.1682HSR/RS/DEE/TNPCB/HSR/A/2022 DATED: 22/08/2022

Sub :	Tamil Nadu Pollution Control Board – AUTO RENEWAL OF CONSENT – M/s. K.M. VIJAYA ROUGH STONE QUARRY, S.F. No. 78/1B pt, KOTTAPETA village, Krishnagiri Taluk and Krishnagiri District- Renewal of Consent for operation of the plant and discharge of emissions under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) – Issued – Reg.
Ref :	1.CTO's Proc.No.F.1682HSR/RS/DEE/TNPCB/HSR/A/2018, Dated: 20/06/2018 2.Unit's OCMMS application No. 46836543 for Auto renewal, Dated,15.07.2022

Renewal of Consent is hereby granted under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) (hereinafter referred to as "The Act") and the rules and orders made there under to:

The Proprietor,
 M/s. K.M. VIJAYA ROUGH STONE QUARRY
 S.F No. 78/1B pt,
 KOTTAPETA Village,
 Krishnagiri Taluk,
 Krishnagiri District.

Authorizing the occupier to operate the industrial plant in the Air Pollution Control Area as notified by the Government and to make discharge of emission from the stacks/chimneys.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This RENEWAL OF CONSENT is valid for the period ending - May 28, 2023.

R
 VENKATESAN

Digitally signed by R
 VENKATESAN
 Date: 2022.08.26
 17:47:42 +05'30'

District Environmental Engineer,
 Tamil Nadu Pollution Control Board,
 HOSUR

SPECIAL CONDITIONS

1. This renewal of consent is valid for operating the facility for the manufacture of products (Col. 2) at the rate (Col. 3) mentioned below. Any change in the products and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl.No.	Description	Quantity	Unit
Product Details :-			
1.	Rough Stone quarrying in an extent of 4.00 hectare, Located at SF. No.78/1B pt, Kothabetta Village, Krishnagiri Taluk & Krishnagiri District	1080884	Cubic Meter/Five Year
By-Product Details :-			
Intermediate Product Details :-			

2. This renewal of consent is valid for operating the facility with the below mentioned emission/noise sources along with the control measures and/or stack. Any change in the emission source/control measures/change in stack height has to be brought to the notice of the Board and fresh consent/Amendment has to be obtained

I Point source emission with stack :				
Stack No	Point Emission sources	Air pollution Control measures provided	Stack height from Ground Level in m	Gaseous Discharge in Nm ³ /hr
II Fugitive/Noise emission :				
Sl.No.	Fugitive or Noise Emission sources	Type of Emission	Control measures provided	Quantity
1.	Vehicle Movement	Fugitive	Water Sprinkling System	
2.	Drilling	Fugitive	Water Sprinkling System	

Special Additional Conditions-

i. The unit shall install the approved retrofit emission control device/equipment with at least 70% Particulate matter reduction efficiency on all DG sets with capacity of 125 KVA and above or otherwise the unit shall be shift to gas based generators within the time frame prescribed in the notification No.

TNPCB/Labs/DD(L)02151/2019 dated 10.06.2020 issued by TNPCB.

ii. The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board /National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional Conditions-

Special Additional Conditions:

i. The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board/National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional conditions:

1. The unit shall carryout the quarrying activity only with the quarry lease agreement made with the District collector, Krishnagiri.
2. The unit shall comply all the conditions prescribed in the Environmental Clearance issued vide Lr No. 34/DEIAA-KGI/EC.No.26/2018 Dated 27/02/2018.
3. The unit shall comply with the conditions imposed in the Mining Lease Agreement entered with the District Collector, Krishnagiri dated on 30/05/2018.
4. The unit shall operate and maintain the APC measures in the form of portable water sprinklers effectively and continuously so as to satisfy the NAAQ / Emission standards prescribed by the Board.
5. The unit shall adhere to the ANL standards as prescribed by the Board.
6. The unit shall continue to develop more green belt with trees having thick canopy cover in the unit's premises.
7. The unit's operation/ activity for the mining shall not disturb the nearby agricultural land if any at any circumstances.
8. The unit shall take necessary precautionary measures to prevent any adverse impact on the nearby habitation.

9. The consent issued is subject to the final outcome of National Green Tribunal (South Zone) in application No. 165/2013.

10. In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification, failing which this order will be withdrawn without any notice and further action will be initiated against the unit as per law.

R VENKATESAN
Digitally signed by R VENKATESAN
Date: 2023.03.26 12:46:07
+05'30'

District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR.

To

The Proprietor,

M/s. K.M. VIJAYA ROUGH STONE QUARRY,

No.58, Gandhi Nagar, Krishnagiri

Town & Krishnagiri District, 635001.

Pin: 635001

Copy to:

1. The Commissioner, KRISHNAGIRI-Panchayat Union, Krishnagiri Taluk, Krishnagiri District.
2. Copy submitted to the Member Secretary, Tamil Nadu Pollution Control Board, Chennai for favour of kind information.
3. Copy submitted to the JCEE-Monitoring, Tamil Nadu Pollution Control Board, Vellore for favour of kind information.
4. File

This is computer generated. Signature is not required.

RENEWAL OF CONSENT ORDER NO:2209146836543

DATE:22/08/2022


செழும்பு திருநாள்

PROCEEDINGS NO.F.1682HSR/RS/DEE/TNPCB/HSR/W/2022 DATED: 22/08/2022

Sub :	Tamil Nadu Pollution Control Board – AUTO RENEWAL OF CONSENT – M/s. K.M. VIJAYA ROUGH STONE QUARRY S.F No. 78/1B pt, KOTTAPETA Village, Krishnagiri Taluk, Krishnagiri District- Renewal of Consent for the operation of the plant and discharge of sewage and/or trade effluent under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act 6 of 1974) – Issued- Reg.
Ref :	1. CTO's Proc.No.F.1682HSR/RS/DEE/TNPCB/HSR/W/2018, Dated: 20/06/2018 2. Unit's OCMMS application No. 46836543 for Auto renewal, Dated.15.07.2022

Renewal Of Consent is hereby granted under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act, 6 of 1974) (hereinafter referred to as "The Act") and the rules and orders made there under to

The Proprietor,
M/s. K.M. VIJAYA ROUGH STONE QUARRY
S.F No. 78/1B pt,
KOTTAPETA Village,
Krishnagiri Taluk,
Krishnagiri District.

Authorising the occupier to make discharge of sewage and /or trade effluent.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This RENEWAL OF CONSENT is valid for the period ending - May 28, 2023

R
VENKATESAN
Digitally signed by R
VENKATESAN
Date: 2023.08.26
17:48:58 +05'30'
District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR

SPECIAL CONDITIONS

1. This renewal of consent is valid for operating the facility for the manufacture of products (Col. 2) at the rate (Col. 3) mentioned below. Any change in the products and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl.No.	Description	Quantity	Unit
a. Product Details :-			
1.	Rough Stone quarrying in an extent of 4.00 hectare, Located at SF.No.78/1B pt, Kothabetta Village, Krishnagiri Taluk & Krishnagiri District	1080884	Cubic Meter/Five Year
b. By-Product Details :-			
c. Intermediate Product Details :-			

2. This renewal of consent is valid for operating the facility with the below mentioned permitted outlets for the discharge of sewage/trade effluent. Any change in the outlets and the quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Outlet No.	Description of Outlet	Maximum daily discharge in KLD	Point of disposal
EFFLUENT TYPE :-			
Effluent Type : Sewage			
1.	Sewage	0.67	On Industrys own land
EFFLUENT TYPE :-			
Effluent Type : Trade Effluent			
OUTLET NUMBER	DESCRIPTION OF OUTLET	MAXIMUM DAILY DISCHARGE (IN KLD)	POINT OF DISPOSAL

Special Additional Conditions:

The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board /National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional Conditions:

Special Additional Conditions:

i. The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board /National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional conditions:

1. The unit shall carryout the quarrying activity only with the quarry lease agreement made with the District collector, Krishnagiri.
2. The unit shall comply all the conditions prescribed in the Environmental Clearance issued vide Lr No. 34/DEIAA-KGI/EC.No.26/2018 Dated 27/02/2018.
3. The unit shall comply with the conditions imposed in the Mining Lease Agreement entered with the District Collector, Krishnagiri dated on 30/05/2018.
4. The unit shall treat and dispose the sewage generated from the unit through Septic tank and Saak pit arrangement.
5. The unit shall ensure that no trade effluent is generated at any stage of its manufacturing process.
6. The unit's operation/ activity for the mining shall not disturb the nearby agricultural land if any of any circumstances.
7. The unit shall take necessary precautionary measures to prevent any adverse impact on the nearby habitation.
8. The consent issued is subject to the final outcome of National Green Tribunal (South Zone) in application No. 165/2013.
9. In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification, failing which this order will be withdrawn without any notice and further action will be initiated against the unit as per law.
10. The unit shall not use 'Use and throwaway plastics' such as plastic sheets used for food wrapping, spreading on dining table etc, plastic plates, plastic coated tea cups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastics flags irrespective of thickness, within the industry premises. Instead unit shall encourage use of eco friendly alternative such as banana leaf, arecanut palm plate, stainless steel, glass,

porcelain plates/cups, cloth bag, jute bag etc.,

11. In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification, failing which this order will be withdrawn without any notice and further action will be initiated against the unit as per law.

R
VENKATESAN

Digitally signed by R
VENKATESAN
Date: 2022.08.28
12:49:26 +05'30'

District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR

To

The Proprietor,
M/s. K.M. VIJAYA ROUGH STONE QUARRY,
No.58, Gandhi Nagar, Krishnagiri
Town & Krishnagiri District, 635001,
Pin: 635001

Copy to:

1. The Commissioner, KRISHNAGIRI Panchayat Union, Krishnagiri Taluk, Krishnagiri District.
2. Copy submitted to the Member Secretary, Tamil Nadu Pollution Control Board, Chennai for favour of kind information.
3. Copy submitted to the JCEE-Monitoring, Tamil Nadu Pollution Control Board, Vellore for favour of kind information.
4. File:

This is computer generated. Signature is not required.

Form 59

[See rules 115 (2)]

Pollution Under Control Certificate

Authorised By :
State Transport Department

Date : 16/05/2023
Time : 09:51:37 AM
Validity upto : 15/05/2024



Certificate SL No. : TN02400170021492
Registration No. : TN24AQ4609
Date of Registration : 28/Jan/2019
Month & Year of Manufacturing : November-2018
Valid Mobile Number : *****8929
Emission Norms : BHARAT STAGE IV
Fuel : DIESEL
PUC Code : TN0240017
GSTIN :
Fees : (GST to be paid extra as applicable)
MIL observation : No

Vehicle Photo with Registration plate
60 mm x 30 mm



Sr. No.	Pollutant (as applicable)	Units (as applicable)	Emission limits	Measured Value (upto 2 decimal places)
1	2	3	4	5
Idling Emissions	Carbon Monoxide (CO)	percentage (%)		
	Hydrocarbon, (THC/HC)	ppm		
High Idling emissions	CO	percentage (%)		
	RPM	RPM	2500 ± 200	
	Lambda	-	1 ± 0.03	
Smoke Density	Light absorption coefficient	1/metre	1.62	1.42

This PUC certificate is system generated through the national register of motor vehicles and does not require any signature.

Note : 1. Vehicle owners to link their mobile numbers to registered vehicle by logging to <https://puc.parivahan.gov.in>

Authorised Signature with stamp of PUC operator
60mm x 20 mm

Form 59

[See rules 115 (2)]

Pollution Under Control Certificate

Authorised By :
State Transport Department

Date : **09/05/2023**
Time : **10:09:38 AM**
Validity upto : **08/05/2024**



Certificate SL No. : TN02400170021363
Registration No. : TN24AQ4618
Date of Registration : 28/Jan/2019
Month & Year of Manufacturing : November-2018
Valid Mobile Number : *****9387
Emission Norms : BHARAT STAGE IV
Fuel : DIESEL
PUC Code : TN0240017
GSTIN :
Fees : (GST to be paid extra as applicable)
MIL observation : No

Vehicle Photo with Registration plate
60 mm x 30 mm



Sr. No.	Pollutant (as applicable)	Units (as applicable)	Emission limits	Measured Value (upto 2 decimal places)
1	2	3	4	5
Idling Emissions	Carbon Monoxide (CO)	percentage (%)		1
	Hydrocarbon, (THC/HC)	ppm		
High Idling emissions	CO	percentage (%)		
	RPM	RPM	2500 ± 200	
	Lambda	-	1 ± 0.03	
Smoke Density	Light absorption coefficient	1/metre	1.62	1.42

This PUC certificate is system generated through the national register of motor vehicles and does not require any signature.

Note : 1. Vehicle owners to link their mobile numbers to registered vehicle by logging to <https://puc.parivahan.gov.in>

Authorised Signature with stamp of PUC operator
60mm x 20 mm

HYDROGEOLOGICAL REPORT FOR
KOTHAPETTA ROUGH STONE QUARRY

HYDROGEOLOGICAL REPORT FOR
KOTHAPETTA ROUGH STONE QUARRY

1. INTRODUCTION

Name of the Applicant with Address-

Name of the applicant : K.M. Vijaya
Address : W/o. D.M. Mathiazhagan
D.No. 58B, Gandhi Nagar,
Krishnagiri Town,
Krishnagiri District – 635 001.
Mobile No: 91 7402702109
State : Tamilnadu.

Details of the Area-

Land Classification : Patta Land
Survey No : 78/1B (P)
Extent in Hectares : 4.00.0ha
Village : Kothapetta
Taluk : Krishnagiri
District : Krishnagiri

The Client requires detailed information on Ground Water Occurrences at Proposed Project Site of Rough Stonequarry. The objective of the present study is to assess the availability of groundwater and comment on aspects of depth to potential aquifers, aquifer availability and type, possible yields and water quality. For this purpose all available hydrogeological information of the areas has been analyzed, and a geophysical survey was done.

The investigations involved hydrogeological, geophysical field investigations and a detailed study in which the available relevant geological and hydrogeological data were collected, analyzed, collated and evaluated within the context of the Client's requirements.

The data sources consulted were mainly:

- a) Central Ground Water Board (CGWB) Data
- b) State & District Geological and Hydrogeological Reports and Maps.
- c) Technical reports of the area by various organizations.

2. SCOPE OF THE WORKS –

The scope of works includes:

- ❖ Site visits to familiarize with the project areas. Identify any issues that might impact the Ground Water Scenario due to proposed mining activities.
- ❖ To obtain, study and synthesize background information including the geology, hydrogeology and existing borehole data, for the purpose of improving the quality of assessment and preparing comprehensive hydrogeological reports,
- ❖ To carry out hydrogeological evaluation and geophysical investigations in the selected sites in order to determine potential for groundwater at project site.
- ❖ To prepare hydrogeological survey reports in conformity with the provisions of the rules and procedure outlined by the Central Ground Water Board (CGWB), by Assessment of water quality and potential infringement of National standards, Assessment of availability of groundwater and Impact of proposed activity on aquifer, water quality and other abstractors.

3. BACKGROUND INFORMATION

Location

The area is marked in the Survey of India, Topo Sheet No. **57 L/12**. The area is between the Latitudes of **12°32'42.0172"N to 12°32'44.4928"N** and Longitudes of **78°12'54.6408"E to 78°12'42.8804"E** on WGS datum-1984.

4. GEOMORPHOLOGY

Krishnagiri district forms part of the upland plateau region with many hill ranges and undulating plains. The western part of the district has hill ranges of Mysore plateau with a chain of undulating hills and deep valleys extending in NNE-SSW direction. The plains of the district have an average elevation of 488 m amsl. The plateau region along the western boundary and the northwestern part of the district has an average elevation of 914 m amsl. The Guthrayan Durg with an elevation of 1395 m amsl is the highest peak in the district.

Soils

Soils have been classified into Black soil, mixed soil, red loamy soil, gravelly and sandy soils. Red loamy and sandy soils are predominant in Hosur taluk. Vast stretches of loam soils and black soils occur in Krishnagiri district.

Rainfall

The district receives the rain under the influence of both southwest and northeast monsoons. The normal annual rainfall over the district varies from about 750 to about 900 mm. It is the minimum around Hosur (767.7 mm) and Rayakottai (768.0 mm) in the northern and central parts of the district. It gradually increases towards west and east and is the maximum around Denkanikotai (910.7 mm) in the western part.

The climate of Krishnagiri district is comparatively more pleasant than that of the surrounding districts due to general dryness of atmosphere and appreciable drop in temperature in the monsoon season. The year may be divided into four seasons namely dry season from January to March, summer season April and May, southwest monsoon season from June to Sept. and northeast monsoon season from October to December.

Climate

During summer season (April to May) the maximum temperature is about 37°C, and the mean daily minimum temperature of about 25°C in the plains. There is a gradual decrease of both day and night temperatures from June onwards till December, when the mean daily maximum temperature is about 30°C and the mean daily min. is about 19°C in plains.

The day temperature increases gradually from January onwards. The lowest temperature is reached in January when the mean daily minimum is about 19°C. However, in higher areas i.e., Hosur, Thally and Krishnagiri taluks day and night temperature is lower by about 2 to 3°C. In these areas weather is comparatively pleasant round the year.

5. GEOLOGY

Regional Geology of Krishnagiri District-

The geological formations of the Krishnagiri district belong mainly to Archaean age along with rock of Proterozoic age. The former is represented by Khondalite Group of rocks, Charnockite Group of rocks, Migmatites Complex, Sathyamangalam Group of rocks, while the latter is represented by alkaline rocks.

The Khondalite Group includes garnet sillimanite gneiss and quartzite which occur as small patches. The migmatite complex includes garnetiferous quartzofeldspathic gneiss and hornblende-biotite gneiss, the former exposed on the western part of the district. The Sathyamangalam Group includes fuchsite quartzite, sillimanite mica schist and amphibolites.

The Bhavani Group in this area includes fissile hornblende-biotite gneiss, granitoid gneiss and pink migmatite. Amphibolites with barbed ferruginous quartzite and associated quartzo-feldspathic rocks (Champion Gneiss) represent the Kolar group and are found west and southwest of Veppanapalli. Following this there are basic intrusions occurring as dykes.

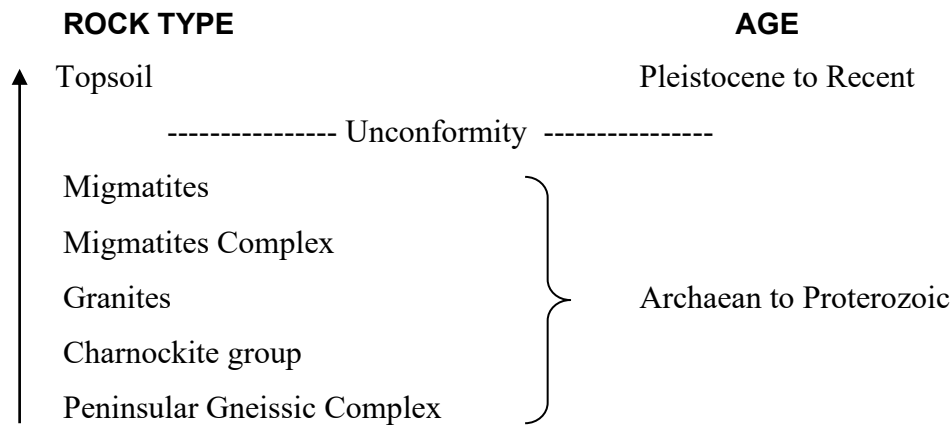
The Charnockite Group occupies a major part of the south-west portion of this district with small bands of Garnetiferous quartzo-feldspathic gneiss, Granite gneiss and dolerite dykes. The North-East and Northern part of the District mainly consist of granite gneiss with small patches of Pink Migmatite, hornblende-biotite gneiss and dolerite dykes. The Eastern part of the district consists of Epidote-Hornblende Gneiss, Ultra Mafics, Syenite and Carbonatite.

The Alkaline Complex is represented by epidote-hornblende gneiss, ultramafics, syenite and carbonatite and these are distributed in the eastern part of the district. Innumerable basic dykes and felsites, quartz, barites and pegmatite veins form part of the Alkali Complex.

STRUCTURAL SETTINGS OF KRISHNAGIRI DISTRICT:

The general geological sequence of the rock types in the area is:-

Order of super position:-



6. GEOPHYSICAL INVESTIGATION METHODS

A variety of methods are available to assist in the assessment of geological sub-surface conditions. The main emphasis of the fieldwork undertaken was to determine the thickness and composition of the sub-surface formations and to identify water-bearing zones. This information was principally obtained in the field using, and vertical electrical soundings (VES). The VES probes the resistivity layering below the site of measurement. This method is described below.

Resistivity Method

Vertical electrical soundings (VES) were carried out to probe the condition of the sub-surface and to confirm the existence of deep groundwater. The VES investigates the resistivity layering below the site of measurement.

Basic Principles

The electrical properties of rocks in the upper part of the earth's crust are dependent upon the lithology, porosity, and the degree of pore space saturation and the salinity of the pore water. Saturated rocks have lower resistivity than unsaturated and dry rocks. The higher the porosity of the saturated rock, or the higher the salinity of the saturating fluids, the lower is the resistivity. The presence of clays and conductive minerals also reduces the resistivity of the rock.

The resistivity of earth materials can be studied by measuring the electrical potential distribution produced at the earth's surface by an electric current that is passed through the earth. Current is moved through the subsurface from one current electrode to the other and

the potential difference is recorded as the current passes. From this information, resistivity values of various layers are acquired and layer thickness can be identified.

The apparent resistivity values determined are plotted as a log function versus the log of the spacing between the electrodes. These plotted curves identify thickness of layers. If there are multiple layers (more than 2), the acquired data is compared to a master curve to determine layer thickness.

This method is least influenced by lateral in-homogeneities and capable of providing higher depth of investigation.

The resistance R of a certain material is directly proportional to its length L and cross-sectional area A , expressed as:

$$R = R_s * L/A \text{ (in Ohm)}$$

Where R_s is known as the specific resistivity (characteristic of the material and independent of its shape or size)

With Ohm's Law,

$$R = dV/I \text{ (Ohm)}$$

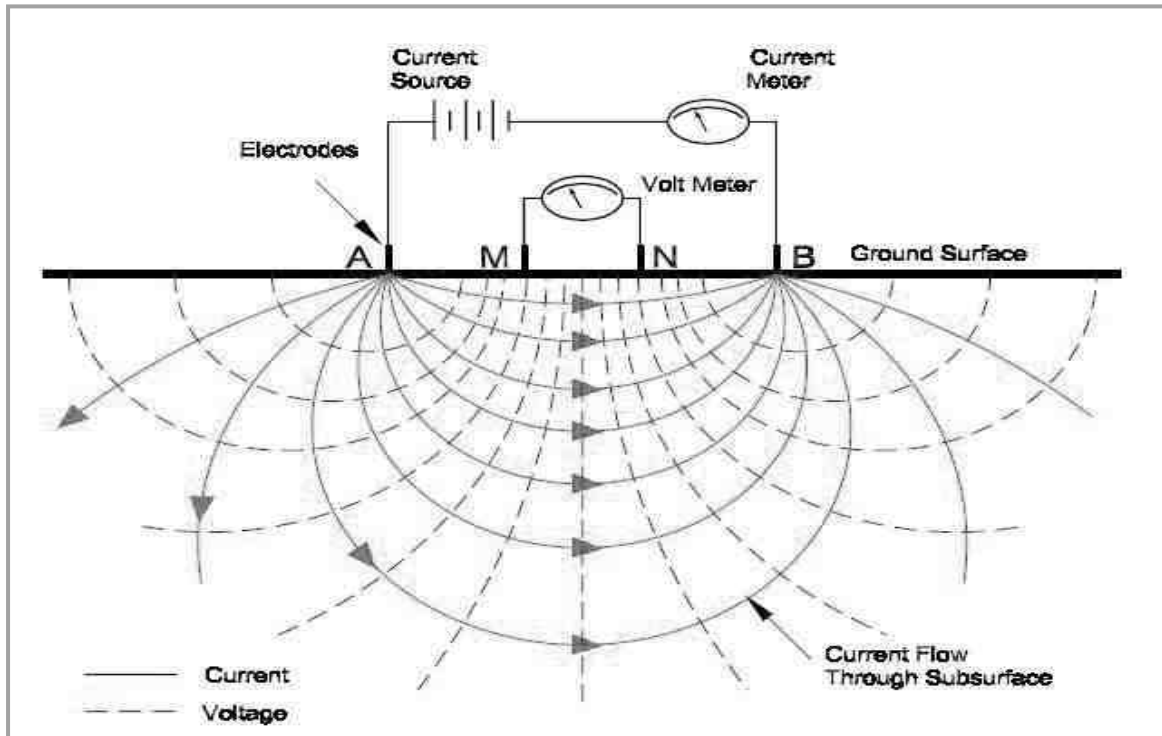
Where dV is the potential difference across the resistor and I is the electric current through the resistor. The specific resistivity may be determined by:

$$R_s = (A/L) * (dV/I) \text{ (in Ohm m)}$$

Vertical Electrical Sounding (VES)

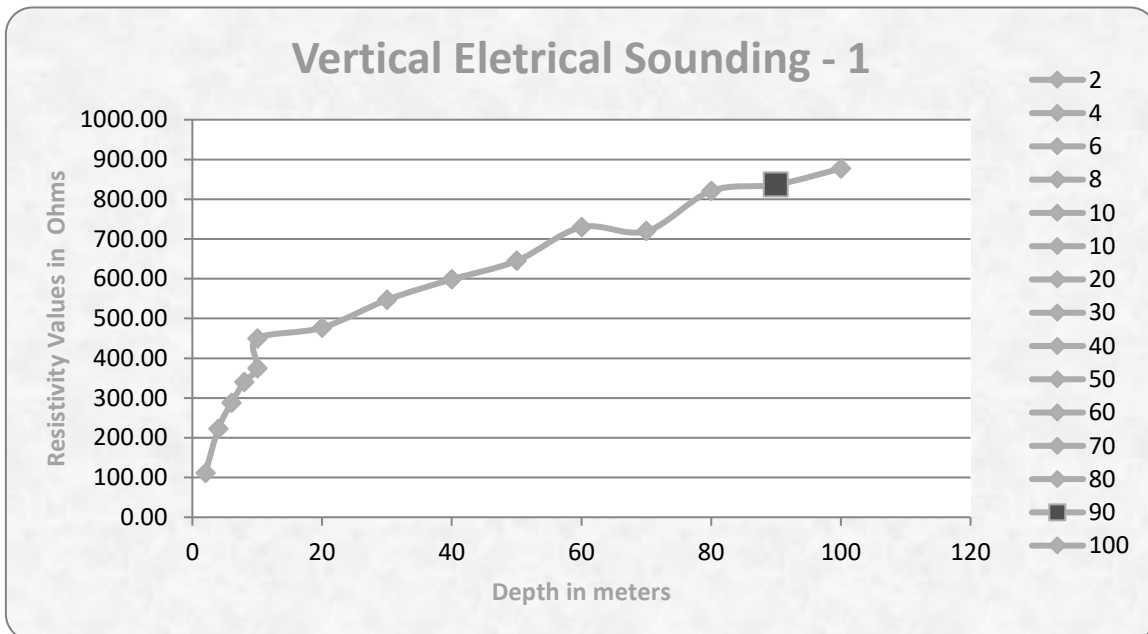
When carrying out a resistivity sounding, current is led into the ground by means of two electrodes. With two other electrodes, situated near the center of the array, the potential field generated by the current is measured. From the observations of the current strength and the potential difference, and taking into account the electrode separations, the ground resistivity can be determined. During resistivity sounding, the separation between the electrodes is step-wise increased (known as a Schlumberger Array), thus causing the flow of current to penetrate greater depths. When plotting the observed resistivity values against depth on double logarithmic paper, a resistivity graph is formed, which depicts the variation of resistivity with depth. This graph can be interpreted with the aid of a computer, and the actual resistivity layering of the subsoil is obtained. The depths and resistivity values provide the hydro geologist with information on the geological layering and thus the occurrence of groundwater.

Vertical Electrical Sounding Methods



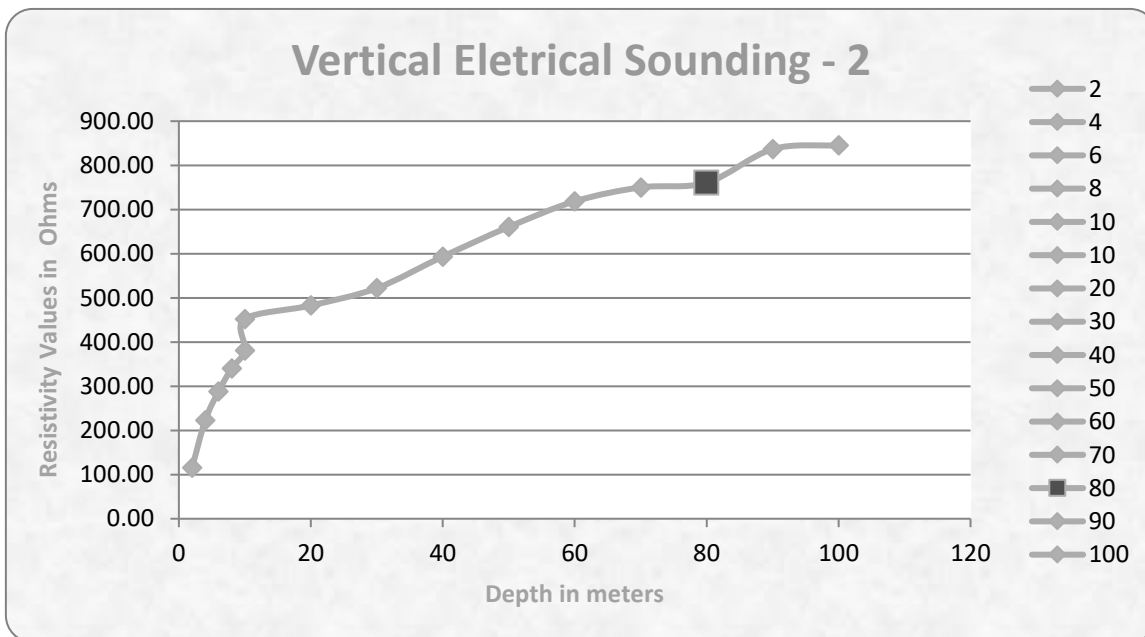
Vertical Electrical Sounding data's and Diagram

Vertical Electrical Sounding - 1					
GPS Coordinates - 12°32'39.83"N 78°12'50.02"E					
S.No	Ab/2(m)	Mn/2(m)	Geometrical Factor (G)	Resistance Value in Ohms	Apparent Resistance in Ohms
1	2	1	4.71	23.56	110.97
2	4	1	23.55	9.45	222.55
3	6	1	54.95	5.23	287.39
4	8	1	98.91	3.44	340.25
5	10	1	155.45	2.41	374.63
6	10	5	23.55	19.10	449.81
7	20	5	117.75	4.05	476.89
8	30	5	274.75	1.99	546.75
9	40	5	494.55	1.21	598.41
10	50	5	777.15	0.83	645.03
11	60	5	1122.55	0.65	729.66
12	70	5	1530.75	0.47	719.45
13	80	5	2001.75	0.41	820.72
14	90	5	2535.55	0.33	836.73
15	100	5	3132.15	0.28	877.00



◆ A vertical electrical Sounding Graph diagram purple level is fracture zone.

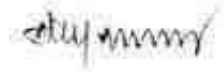
Vertical Electrical Sounding - 2					
GPS Coordinates - 12°32'42.26"N 78°12'52.06"E					
S.No	Ab/2(m)	Mn/2(m)	Geometrical Factor (G)	Resistance Value in Ohms	Apparent Resistance in Ohms
1	2	1	4.71	24.50	115.40
2	4	1	23.55	9.46	222.78
3	6	1	54.95	5.24	287.94
4	8	1	98.91	3.44	340.25
5	10	1	155.45	2.45	380.85
6	10	5	23.55	19.20	452.16
7	20	5	117.75	4.10	482.78
8	30	5	274.75	1.90	522.03
9	40	5	494.55	1.20	593.46
10	50	5	777.15	0.85	660.58
11	60	5	1122.55	0.64	718.43
12	70	5	1530.75	0.49	750.07
13	80	5	2001.75	0.38	760.67
14	90	5	2535.55	0.33	836.73
15	100	5	3132.15	0.27	845.68



◆ A vertical electrical Sounding Graph diagram purple level is fracture zone.

7. Conclusions –

Based on the available information and the geophysical investigations it is concluded that the project area is considered to have medium groundwater potential. Productive aquifers are expected at depth of 85m to 90m where minor fractures are observed and shallow aquifers are expected above 75m to 80m BGL. The ultimate pit limit as per the approved mining plan depth is 31m below ground level which will have no impact on the Ground Water.



Dr. P. Thangaraju, M.Sc., Ph.D.,

Govt. Approved Hydro Geologist

M/s. Geo Exploration and Mining Solutions,
Regd. Office: No. 17, Advaita Ashram Road,
Alagapuram, Salem – 636 004, Tamil Nadu
Mobile: +91 - 94433 56539

E-Mail: infogeoexploration@gmail.com



Cell : 98427 44073, 94437 44073

VISHNU EXPLOSIVES



No.235/9, R.G. Nagar Engineer's Colony Extension, Jagir Reddipatty, Salem - 636 302.

Ref:

Date : 17.07.2023

To

K.M.Vijaya Rough Stone,
No.58-B, Gandhi Nager,
Krishnagiri Taluk,
Krishnagiri District,
Tamil Nadu 635-001.

Sir,

Sub: Willingness to do Explosives Blasting Works – Reg.

With respect to the above subject, we would like to introduce myself as the Explosives Blasting Contractors, for which our LICENCE NO: E/HQ/TN/22/335(E64278) & E/SC/TN/22/463(E37227) S.F.No.344/3B, Paiyur Village, Krishnagiri Taluk magazine is situated in No.273-A, Keel Paiyur Village, Kaveripattinam, Krishnagiri, Tamilnadu-635 112.

We were engaged in professional blasting contract works with all facilities and License holders to carry out blasting works in specified time and period covered under Explosives Rules, 2008.

We kindly request yourself to engage us to do Explosives Blasting Works in your proposed Rough stone Quarry situated at S.F.No: 78/1B (P) in KothapettaVillage, Krishnagiri Taluk, Krishnagiri District over an extent of 4.00.0 hectares.

SERVING BEST AT ALL TIMES

Thanking you.

For VISHNU EXPLOSIVES,

Enclosure: Magazine License Copy.

अनुमति प्रपत्र फॉर्म ई-3 | LICENCE FORM LE-3

(विस्फोटक नियम 2008 की अनुसूची 4 के भाग 1 के अनुच्छेद 3(क) से (घ) देखिए।)
(See article 3(a) to (d) of Part 1 of Schedule IV of Explosives Rules, 2008)

(ग) उपयोग के लिए एक समय पर वर्ग 1, 2, 3, 4, 5 या वर्ग 7 के विस्फोटक या किसी मैगजीन में वर्ग 6 के विस्फोटक रखने के लिए अनुमति
Licence to possess: (c) for use explosives of class 1, 2, 3, 4, 5, 6 or 7 as a magazine

अनुमति नं. (Licence No.): ESC/TN/22/463(E37227)
वार्षिक फीस राशि (Annual Fee Rs) 10400/-

1. Licence is hereby granted to

M/s Vishnu Explosives (होपिताली / Occupier: Shri G.V.Sai Supramaniam), Vidutha Explosives, 27/A, Keelipaiyer Village, Kaveripattanam Taluk, Town/Village - Kaveripattanam, District-KRISHNAGIRI, Som-Tamir Nadu, Pincode - 635112.



को अनुमति अनुदान की जाती है।

2. अनुमतिधारी की प्रकृति: Status of licensee: Proprietorship Firm

3. अनुमति निम्नलिखित प्रकारों के लिए विधिवत है।
Licence is valid only for the following purpose.

process for use of Detonators, Slurry Explosives, Detonating Fuse, Safety Fuse, के उपयोग के लिए

4. अनुमति विस्फोटकों के निम्नलिखित किस्मों, प्रकार और मात्रा के लिए विधिवत है।
Licence is valid for the following kinds and quantity of explosives: - (क) (A)

क्र. सं.	नाम और विवरण	वर्ग और प्रभाग	उप-प्रभाग	प्रति किसी एक समय में
Sr No	Name and Description	Class & Division	Sub-division	Quantity at any one time
1	Slurry Explosives	2.B	0	4500 Kg
2	Detonating Fuse	6.2	0	30000 Mtrs
3	Safety Fuse	6.1	0	10000 Mtrs
4	Detonator	6.3	0	44000 Nos

(क) किसी एक क्वॉटर मात्र में खरीदे जाने वाले विस्फोटक की मात्रा (अनुच्छेद 3(क) और (ग) के अर्धी अनुमति के लिए)

20 times as above.

(ख) Quantity of explosives to be purchased in a calendar month (applicable for licence under article 3(a) and (c))

5. निम्नलिखित रेखाचित्र (रेखाचित्रों) में अनुमति परिसर की वृष्टि होती है।
The licensed premises shall conform to the following drawing(s).

रेखाचित्र नं. (Drawing No) ESC/TN/22/463(E37227)
दिनांक (Dated) 18/06/1990

6. अनुमति परिसर निम्नलिखित पते पर स्थित है। The licensed premises are situated at following address.

Survey No. 344/3B, वार्ड (Town/Village): Faiyar, Krishnagiri-taluk
जिला (District): KRISHNAGIRI
पिनकोड (Pincode): 635112
टैलर नुदा (Taluk): Tamil Nadu
फैक्स (Fax):

7. अनुमति परिसर में निम्नलिखित सुविधाएं उपलब्ध है।
The licensed premises consist of following facilities.

main III magazines, hobby & detonator room

8. अनुमति समय-समय पर समायोजित विस्फोटक अधिनियम, 1884 और उसके अर्धी विधिवत विस्फोटक नियम, 2004 के उपबंध, शर्तों और अधिनियम शर्तों और निम्नलिखित उपबंधों के अर्धी रहने पर अनुदान की जाती है।
The licence is granted subject to the provisions of Explosives Act 1884 as amended from time to time and the Explosives Rules, 2004 framed there under and the conditions, additional conditions and the following Annexures

1. उपर्युक्त क्रम क्र. 5 में बंधा कथित रेखाचित्र (स्थान, संनिर्माण तथ्यों और अन्य विवरण दर्शित करने हुए)।
Drawings (showing site, constructional and other details) as stated in serial No. 5 above
2. अनुमति प्राधिकारी द्वारा बनाए गए इस अनुमति की शर्तों और अधिनियम शर्तों।
Conditions and Additional Conditions of this licence signed by the licensing authority.
3. दूरी प्रपत्र DS-2। Distance Form DS-2.

9. यह अनुमति तारीख 31 मार्च 1992 तक विधिवत रहेगी। This licence shall remain valid till 31st day of March 1992.

यह अनुमति, अधिनियम या उसके अर्धी विधिवत नियमों या अनुसूची V के भाग 4 के बर्तन निर्दिष्ट सेट-VII के अर्धी तथा उपबर्तित इस अनुमति की शर्तों का उल्लंघन करने या यदि अनुमति परिसर योजना का उसी संलग्न उपबंध में दर्शित विवरण के अनुकूल नहीं पाए जाने पर निलंबित या प्रसिद्ध की जा सकती है, जहां यह लागू हो।

This licence is liable to be suspended or revoked for any violation of the Act or Rules framed there under or the conditions of this licence as set forth under Set VII, wherever applicable, referred to in Part 4 of Schedule V or if the licensed premises are not found conforming to the description shown in the plans and Annexure attached hereto.

तारीख (The Date - 18/06/1990)

संयुक्त मुख्य विस्फोटक निरीक्षक | Joint Chief Controller of Explosives
South Circle, Chennai

Amendments:

- Change in Postal Address dated: 11/01/2017
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated: 15/01/2018
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated: 15/03/2018
- Amendment in Drawings/Facilities/Premises dated: 11/10/2021
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated: 11/10/2021

Transfers:

- Change in Licensee Name/Address/Status dated: 23/08/2014
- Change in Licensee Name/Address/Status dated: 08/10/2021

संयोजन के पुनर्दान के लिए स्थान
Space for Endorsement of Renewal

संयोजन की तारीख
Date of Renewal

अनुमति की तारीख
Date of Expiry

497 A

अनुमति प्राधिकारी के हस्ताक्षर और स्टाम्प
Signature of Licensing authority and stamp

(Handwritten signature and stamp area)



भारत सरकार | Government of India
 वाणिज्य और उद्योग मंत्रालय | Ministry of Commerce & Industry
पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पेशी) | Petroleum & Explosives Safety Organisation (PESO)
 पूर्व नाम: विस्फोटक विभाग | Formerly: Department of Explosives
 मकान नं. ३, पूर्वोत्तरी स्ट्रीट, कोयंबटूर (नं. ३), वी.ई. ईस्ट क्रॉस रोड
 गांधी नगर वेल्लूर | Gandhi Nagar Vellore-632006
 फोन (Phone)- 2242513 | फैक्स (Fax)-
 ई-मेल Email: dyces@peso.gov.in

संख्या (No.) ESC/TN/22/463(E37227)

दिनांक (Date): 10/03/2022

सेवा में / To

M/s Vidhana Explosives,
 Police Explosives, 273-A, Keelapayar Village, Kaveripattanam Taluk, Tiruvallur Village - Kaveripattanam
 District KRISHNAGIRI, State Tamil Nadu, Pincode - 631112

विषय

Survey No.3447B, कोयंबटूर, Poyar, Krishnagiri- taluk, जिला KRISHNAGIRI, राज्य Tamil Nadu में विस्फोटक के गोदामों में उपयोग के लिए कब्जा हेतु विस्फोटक नियम, 2008 के अनुसूची LE-3 में जारी अनुमति सं. ESC/TN/22/463(E37227) के नवीनीकरण संबंध में।

Subject

Permission for Use of Explosives from magazine situated at Survey No.3447B, Poyar, Krishnagiri- taluk, Dist. KRISHNAGIRI, Tamil Nadu - License No. - ESC/TN/22/463(E37227) granted in Form LE-3 of Explosives Rules, 2008 - Renewal regarding

सूची सं. / Sr.

आपका उपरोक्त विषय पर वर संख्या 58762 दिनांक 02/03/2022 का संदर्भ रहना चाहिए। विस्फोटक नियम, 2008 के अनुसूची प्रस्ताव LE-3 में जारी अनुमति दिनांक 31/03/2027 तक नवीनीकरण कर इस पर के लागू होगी।

Reference to your letter No. 59762 dated 02/03/2022, the subject license duly renewed upto 31/03/2027 and issued in Form LE-3 of Explosives Rules, 2008 is forwarded herewith.

अनुमति के अंतिमी नवीनीकरण हेतु कृपया निम्नलिखित दस्तावेज दिनांक 31/03/2027 से पहले इस कार्यालय को भेजे जाएं।
 For further renewal of license, please submit the following documents so as to reach this office on or before 31/03/2027

- प्रस्ताव (आर्ई-1) में विधिवत पूर्ण एवं हस्ताक्षरित आवेदन।
Application in Form KE-1 duly filled in and signed
- एक से पांच वर्षों के अनुमति शुल्कों का, विस्फोटक नियम, 2008 के तहत ऑनलाइन आवेदन पोर्टल पर उपलब्ध ई-भुगतान सुविधा के माध्यम से अनुमति शुल्क ऑनलाइन जमा किया जाना है।
License fees renewable for one to five years, to be submitted online through e-payment facility available on online application portal under the Explosives Rules, 2008
- अनुमति प्राप्त के साथ मूल अनुमति।
Original license with approved plan
- कृपया इस संबंध में विस्फोटक नियम, 2008 के नियम 112 का भी संदर्भ रहना चाहिए।
In this connection, please also refer to Rule 112 of Explosives Rules, 2008.
- विस्फोटकों के खप हेतु आर्ई-11 में मास्पर (इंटीक) अनुमति को दिनांक और उम्र की एक प्रती इस कार्यालय को भेजी जाए (अतिरिक्त गोदाम के लिए लागू नहीं)।
Index for purchase of explosives shall be placed in KE-11 with the supplier and copy of the same shall be sent to this office (Not applicable for fireworks store house)
- कृपया विस्फोटकों की वैश्वीक विवरणी हर तिमाही के अंत में आर्ई-1 में प्रस्तुत की जाए। विवरणी इस कार्यालय के कार्यालय में अंतिमी तिमाही के 10 तारीख से पहले पहुंच जानी चाहिए (अतिरिक्त गोदाम के लिए लागू नहीं)। Please submit quarterly returns of explosives in KE-1 at the end of every quarter so as to reach this office by 10th of the succeeding quarter. (Not applicable for fireworks store house)
- सभी ब्लास्टिंग ऑपरेशन एक कम्पेनट द्वारा की जाएगी जो उपरोक्त नियमों के तहत एक वैध शॉट फायर प्रमाणपत्र धारक हो। हालांकि, ब्लास्टिंग ऑपरेशन 1952 के अधिन आने वाले कानून में ब्लास्टिंग ऑपरेशन करने वाले ब्लास्टर की योग्यता उरी अधिनियम से निर्धारित हो।
All blasting operations shall be carried out by a competent person holding a valid shot fire permit granted under above rules. However, blasting operations in mines coming under the purview of the Mines Act 1952, the blaster shall have qualifications prescribed in the regulations framed under the said Act.

भवदीय / Yours faithfully

(**डॉ.डी.एन.कामले** | Dr. Dakshinamoorthy Kamble)
 विस्फोटक नियंत्रक | Controller of Explosives
 कोयंबटूर विस्फोटक नियंत्रक | For Controller of Explosives

वेल्लूर | Vellore
विस्फोटक नियंत्रक, वेल्लूर
 Controller of Explosives, Vellore

प्रतिनिधि कोष | Copy Forwarded to

1. जिला मजिस्ट्रेट (District Magistrate), KRISHNAGIRI (Tamil Nadu)- अधिसूचना के लिए (for

कोयंबटूर विस्फोटक नियंत्रक | For The Controller of Explosives,
 वेल्लूर | Vellore

(अधिक जानकारी के लिए आवेदन की स्थिति शुल्क आदि के लिए हमारी वेबसाइट <http://peso.gov.in> देखें।)
 (For more information regarding status, fees and other details please visit our website <http://peso.gov.in>)


Note :- This is system generated document does not require physical signature. Applicant may take printout for their

Form DE-2
(See rule 113 of the Explosives Rules, 2008)
(Distance Form to be attached to the licence)

Safety distances required to be kept clear around magazine for high explosives or fire works or factory licence number E/SC/TN/22/463(E37227) in form LE-3 granted to M/s Vishnu Explosives, Vishnu Explosives, 273-A, Keelpaiyur Village, Kaveripatinam Taluk, Tamil Nadu-635112.

Type of Structure(s)	Safety distances meters	
Inside Safety Distances(ISD)		
	M	UM
1 Room or Workshop used in Connection with the Magazine	41	
2 Any other Explosives Magazine or store House or Factory of the Applicant		
3 Magazine Office		
Middle Safety Distances(MSD)		
4 Magazine Keeper's or Chowkidar's Dwelling house		
5 Railway including Minerals and Private Railways		
6 Canal (in active use) or other navigable water		
7 Dock or Pier or Jetty		
8 Public Highway or Public Road		180
9 Private Road which is PRINCIPAL means of access to a Temple, Mosque, Church, Gurudwara or other places of worships, Hospital, College, School or Factory		
10 River Embankment or Sea Embankment or Public Well		
11 Reservoir or Bounded tank/rope way		
12 Windmill or Solar panel for Power Generation		
Outside Safety Distances(OSD)		
13 Dwelling House		
14 Govt. and Public Building		
15 Temple, Mosque, Church or Gurudwara or other Places of Worships		
16 Shops, Market place, Public recreation and Sports Ground, College, School, Hospital, Theater, Cinema or other Building where the public are accustomed to assemble		
17 Factory		
18 Buildings or Works used for the Storage in Bulk of Petroleum, Spirit, gas, or other inflammable or hazardous substances		359
19 Building or Works used for Storage and Manufacture of Explosives or of articles which contain Explosives		
20 Aerodrome		
21 Furnace, Kiln or Chimney		
22 Quarry or mine pit head		
23 Power House or Electric Substation		
24 Wireless Station		
25 Warehouse or other Storage Building		
26 Any other Protected works		
Overhead Electric lines		
27 Electric Power over head Transmission Lines above 440V		90
28 Electric Power over head Transmission Lines upto 440V		15

The Date : 18/06/1990


 For Joint Chief Controller of Explosives
 South Circle, Chennai
 विस्फोटक नियंत्रक, चेन्नई
 Controller of Explosives, Vellore

Amendments :

- Change in Postal Address dated : 11/01/2017
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 15/01/2018
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 15/03/2018
- Amendment in Drawings/Facilities/Premises dated : 10/10/2021
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 15/01/2018

(शर्त VIII (Set VIII))

मैगजीन में वर्ग 1,2,3,4,5,6 और 7 के विस्फोटकों को किसी या प्रयोग हेतु रखने के लिए प्रत्येक वर्ग.ई. 3 (अनुच्छेद 3 (ब) से (ग) में मुख्य विस्फोटक निबंधन या विस्फोटक निबंधन द्वारा प्रदान किए जाने वाले अनुमति सं. E/SC/TN/22/463(E37227) की शर्तें विनियमित हैं।
The following are the conditions of license number E/SC/TN/22/463(E37227) to possess for sale or use explosives of Class 1,2,3, 4, 5, 6 and 7 in a magazine in Form LE-3 (articles 3(b) to (g)) granted by Chief controller of Explosives or Controller of Explosives.

- परिसर में किसी भी समय विस्फोटकों की मात्रा अनुमति योग्य मात्रा से अधिक नहीं होगी।
The quantity of explosives in the premises at any one time shall not exceed the licensable capacity.
- विस्फोटकों के भंडारण के लिए प्रयुक्त होने वाली मैगजीन अनुसूची III और अनुमति के उपबंधों से विनिर्दिष्ट सुरक्षा दूरी बनाए रखना होगा।
The magazine used for storage of explosives shall maintain safety distance specified in Schedule III and annexure to the license.
- मैगजीन का प्रयोग उन सभी विस्फोटकों के, जो इस अनुमति में विनिर्दिष्ट हैं, रखे जाने के लिए और ऐसे रखे जाने से संबंध अथवा जोड़ना या अचलता के रखे जाने के लिए ही किया जाएगा अन्यथा नहीं।
The magazine shall be used only for keeping all explosives specified in this license and of receptacles for, or tools or implements for work connected with the keeping of such explosives.
- पैकेटों को खोलने का कार्य और विस्फोटकों को तौलने तथा पैक करने का कार्य मैगजीन में नहीं किया जाएगा।
The opening of packages and the weighing and packing of explosives shall not be carried on in the magazine.
- टो या टो से अधिक वर्णों के विस्फोटकों को, जिन्हें मैगजीन में रखे जाने की अनुमति दी जा सकती है, मैगजीन में रखे रखे जाने जब उनमें से प्रत्येक को, ऐसे पदार्थों का स्वयं का कोई सामग्री विभाजन लगाया या उनमें बीच-बीच में सामग्री स्थान छोड़कर, परस्पर पृथक कर दिया जाए कि किसी बंद से विस्फोटक में लगने वाली अलग या होने वाला विस्फोटक किसी अन्य वर्णों के विस्फोटक तक न पहुंच सके। परंतु -
(ए) 2 (नाइट्रेट मिश्रण), वर्ग 3 (नाइट्रेट यौगिक) के विभिन्न विस्फोटक, वर्ग 6 प्रथम प्रकार के अंग्रेज आने वाले सुरक्षा वाली और वर्ग 6 प्रथम 2 के अंग्रेज आने वाले विस्फोटक प्रकृति, जिनमें कोई सुरक्षा लोहा या इस्पात नहीं है, एक दूसरे के साथ बिना किसी सामग्री विभाजन या स्थान के रखे जा सकते हैं।
(B) वर्ग 6 प्रथम 1 के अंग्रेज आने वाले विस्फोटक पैक अलग रखे जाएंगे।
(C) वर्ग 1 के अंग्रेज आने वाले बंद को अलग रखा जाएगा।
Two or more description of explosives which may be permitted to be kept in the magazine shall be kept only if they are separated from each other by an intervening partition of such substance or character, or by such intervening space, as will effectually prevent explosion or fire in the one communicating with the other. Provided that—
(A) The various explosives of Class 2 (nitrate-mixture), Class 3 (nitro-compound), safety fuses belonging to Class 6 Division 1 and detonating fuses belonging to Class 6 Division 2 do not contain any exposed iron or steel, may be kept with each other without any intervening partition or space;
(B) Detonators belonging to Class 6 Division 3 shall be kept separately.
(C) Gun powder belonging to Class 1 shall be kept separately.
- वर्ग 3 (नाइट्रेट यौगिक) के विस्फोटकों को, इसके विनिर्माण की तारीख से एक वर्ष बीत जाने के बाद मात्र निबंधन अनुमति अधिकारी की विशेष मंजूरी के मैगजीन में नहीं रखा जाएगा।
Explosives of Class 3 (nitro compound) shall not be kept in the magazine after the expiration of one year from the date of their manufacture except with the special sanction of licensing authority.
- वर्ग 3 (नाइट्रेट यौगिक) के विस्फोटकों को, उनके विनिर्माण की तारीख से एक वर्ष बीत जाने के बाद मात्र मैगजीन में नहीं रखा जाएगा जब कि किसी विस्फोटक निबंधन से इसके लिए विशेष मंजूरी दी हो।
(i) जब ऐसे मंजूरी दी दी गई हो तो प्रत्येक निरीक्षण पर किसी विस्फोटक निबंधन से ऐसा लिखित प्रमाणपत्र अनिवार्य कर दिया जाए जिसमें दी गई मंजूरी के अंग्रेज आने वाली अवधि दर्शाई की गई हो और ऐसे प्रमाणपत्र के अनुमतिधारी अपने पास रखें और भंग की जाने पर प्रस्तुत करें।
(ii) जब कोई विस्फोटक नमक शुद्धता का न रखे जाने के कारण या धूमिलकरण या नाइट्रेट यौगिकों का इन नाइट्रेट यौगिक के प्रतिक्रिया करने के किण्व प्रकृत होने के कारण मैगजीन में भंडारित किए जाने के अनुपयुक्त नहीं रह जाता है तो अनुमतिधारी अपने ही खर्च पर ऐसे विस्फोटक के निर्यात के लिए ऐसे निदेशों का अनुपालन करेगा जो मुख्य निबंधन या विस्फोटक निबंधन जारी करें।
Explosives of Class 3 (nitro compound) shall not be kept in the magazine after the expiration of one year from the date of their manufacture except with the special sanction of the Controller of Explosives.
(i) When such sanction has been given, a written certificate showing the period covered by the sanction shall be obtained from the Controller of Explosives at each inspection, and shall be kept by the licensee and produced on demand.
(ii) When an explosive owing to its being the largest of standard purity or owing to signs of liquefaction or of exuded nitro-glycerin or liquid nitro-glycerin or liquid nitro compound is no longer fit for storage in the magazine or more hours the licensee shall comply, at his own expense, with such directions as to its disposal as the Chief Controller or Controller of Explosives may issue.
- मैगजीन के भीतरी भंडारण या उसमें लगी हैंडों, बेल्टों और उसकी फिटिंग का इन प्रकार से निरीक्षण किया जाएगा या उन्हें इस प्रकार अंतर्गत या अवरुद्ध किया जाएगा कि विस्फोटक का किसी लोहे या इस्पात के साथ संपर्क होना न हो सके। भीतरी भंडारण में लगी हैंडों, बेल्टों और फिटिंग को आवश्यक स्थिति में सुधार एवं सफाई रखे जाएंगे तथा ऐसे विस्फोटक, जो जल से छत्ररतक रूप में प्रभावित हो सकते हैं, इस बाजार सम्यक सावधानी बरती जाएगी कि वहां कोई जल मौजूद न रहे। परंतु किसी लोहे या इस्पात के बने होने के विरुद्ध सावधानी से संवर्धित इन शर्तों का वह अलग ऐसे किसी कारण से बाधित नहीं होगा जिसमें वर्ग 6 (सीसा बंद) के प्रयोग के विस्फोटक से किंगन कोई विस्फोटक रखा गया है।
The interior of the magazine and the benches, shelves and fittings thereon shall be so constructed or so lined or coated as to prevent the exposure of any iron or steel contact with the explosives. Such interior, benches, shelves and fittings shall so far as is reasonably practicable, be kept free from rust and shall otherwise be clean, and in the case of any explosives liable to be dangerously affected by water, due precautions shall be taken to exclude water therefrom.
Provided that so much of this condition or relates to precautions against the exposure of any iron or steel shall not be obligatory in a building in which no explosive other than explosives of the 1st Division 6th (Ammonium) Class is kept.
- यदि लइटिंग कंडक्टर का परीक्षण विस्फोटक निबंधन करता है तो अनुमतिधारी ऐसे परीक्षण के लिए विहित सीमा का स्टाफ करेगा यदि परीक्षण अस्माधानकारी अक्षम होता है तो उसमें ही सीमा अनुमतिधारी द्वारा पर्याप्ततः चर्चक परीक्षण के लिए तब तक दी जाती रहेगी जब तक कि परीक्षण अधिकारी लीटिंग कंडक्टर को समाधानपत्र घोषित नहीं कर देता।
परंतु किसी एक परीक्षण के लिए टेब सीमा किसी एक दिन के दौरान किसी घातक के लिए गए सभी परीक्षणों के लिए प्रदर्शनी होगा।
परंतु यह और कि यदि दो या अधिक लइटिंग कंडक्टर एक ही मैगजीन में संबद्ध हैं तो ऐसे सभी घातकों के परीक्षण के लिए वही एक ही किसी वीस से अधिक नहीं होगी जो किसी एक लइटिंग कंडक्टर के परीक्षण के लिए हर स्थिति में विहित की गई है।
If the lighting conductor is tested by the Controller of Explosives, the licensee shall pay the fees prescribed for test. In the event of the test proving unsatisfactory, the same fees shall be payable by the licensee for each subsequent test until the lighting conductor is passed by the testing officer as satisfactory.
Provided that the fees payable for a single test shall be charged for all tests made on a conductor during any one day.
Provided further that where two or more lighting conductors are attached to one and the same magazine, the fee for the testing of all such

10. उपयुक्त तथा जैव इंधन कार्यकरण इत्यादि। उपयुक्त जूती के धबड़े धारण तथा तलवारों सेकना या अन्यथा अथवा ऐसे किसी साधनों द्वारा इन कार्यों सम्पन्न उपबंध किया जानना कि किसी भीरिसा में अग्नि, विस्फोटक अथवा ऐसी कोई वस्तुएं या पदार्थ, जिससे विस्फोट हो सकता है या अग्नि लग सकती हो, किन्तु इन चीजों के कारण ऐसी संरचना, स्थिति या व्यवस्था में किसी क्षतिग्रस्त बत्ती या प्रदीप बजित नहीं है जिससे अग्नि लगने या विस्फोट होने का खतरा न हो।
 Due provisions shall be made by the use of suitable working clothes without pockets, suitable shoes and by searching or otherwise or by such means, for preventing the introduction into danger area of the factory premises of fire, Lucifer matches or any substance or article likely to cause explosion or fire, but this condition shall not prevent the introduction of an artificial light of such construction, position or character as not to create any danger of fire or explosion.
 Provided that so much of this condition as applies to the exclusion of iron or steel, shall not be obligatory in a building in which no explosive other than an explosive of the 1st Division of the 6th (Ammunition) Class is kept.
11. अनुमतिपत्र धारक आर.ई.-3 और आर.ई.-4 या आर.ई.-5, जैसी स्थिति हो, में सभी विस्फोटक को अभिलेख और लेखा रखना और विस्फोटक नियंत्रण 2008 के अधीन प्राधिकृत किसी भी अधिकारी के समक्ष उनके धारा ऐसा करने की मान की जाने पर स्टॉक पुस्तक और अभिलेख प्रस्तुत करना।
 The licensee shall keep records and accounts of all explosives in Forms RE-3 and RE-4 or RE-5, as the case may be, and exhibit the stock books and records to any of the officers authorized under the Explosives Rules, 2008 whenever such officer may call upon him to do so. The stock books in the prescribed forms shall be page numbered.
12. परिवारों में कोई परिवर्तन या लंबीदूरी अनुमतिपत्र अधिकारी के पूर्वानुमोदन बिना नहीं की जायगी और अनुमतिपत्रों ऐसी किसी बात का अनुपालन करेगा जो इस विहित अनुमतिपत्र अधिकारी विनियमित करे।
 No changes or alterations shall be carried out to the premises without prior approval of the licensing authority and the licensee shall comply with any condition that may be specified by the licensing authority in this behalf.
13. मैगजीन सभी समयों पर अच्छी संरचना की स्थिति में बनाई रखी जायगी (या अच्छी हालत में बनाई रखी जायगी)। यदि किसी कारणवश किसी विस्फोटक के संप्रदाय के लिए मैगजीन अनुपयुक्त हो जाती है तो अनुमतिपत्र धारक को तुरंत सूचना देना।
 Magazines shall at all times be kept in state of good repair (or maintained in good condition). The licensee shall report to licensing authority forthwith, if the magazine becomes unfit for storage of any explosives for any reason whatsoever.
 The licensee of the magazine shall submit quarterly return as per sub-rules (2) and (4) of rule 24 of these rules.
14. यदि सुरक्षा दूरी का कोई अधिचलन होता है तो उसकी सूचना अनुमतिपत्र अधिकारी को तुरंत सूचना देना और कार्यवाही के लिए तुरंत दी जायगी।
 Any encroachment of the safety distance shall be immediately communicated to the licensing authority for necessary advice and action.
15. यदि कोई विस्फोटक विनियम द्वारा अथवा अनुमतिपत्रों द्वारा अथवा ऐसी सूचना अनुमतिपत्र अधिकारी को, समाप्त प्रेषण करने के लिए, तुरंत दी जायगी।
 The licensing authority shall be immediately informed for advice if any explosive is found deteriorated or unrecognizable.
16. विस्फोटक के पैकेटों के धबड़े इन पैकेट जमाने जायें कि कम से कम एक व्यक्ति आसपास किए गए सभी पैकेटों की हालत की जांच करने और प्रत्येक पैकेट की विनिर्माण विनियमितियों को पढ़ने के लिए उनके धबड़े से होकर आ जा सके।
 The explosive packages shall be stacked in such a way so as to allow movement of at least one person to check the condition of all packages stored and to read the manufacturer particulars of each package.
 The resistance of the lightning conductor to earth shall be as low as possible and in no case be more than 10 ohms.
17. मैगजीन के चारों ओर 15 मीटर की दूरी के अंदर कोई बुझा धारा या झाड़ी या जलजलीय सामग्री नहीं रहने दी जायगी।
 A distance of 15 meters surrounding the magazine or store house shall be kept clear of dried grass or bush or flammable materials.
18. विस्फोटक के धबड़े पैकेट की जब तक मैगजीन के भीतर लिया जा रहा हो, ठीक तरह जाने के लिए परीक्षा की जायगी।
 Every package of explosive at the time of bringing inside the magazine shall be examined for its sound condition.
19. किसी मैगजीन/आधारभूत में किसी एक समय में चार व्यक्ति नहीं अधिक हो सके रहने दिए जायें।
 Not more than 4 persons shall be allowed inside the magazine or store house of any site late.
20. विस्फोटक के खाली पैकेटों को तुरंत हटा दिया जायगा और सफाई कर दिया जायगा।
 Empty packages of the explosives shall be removed at the earliest and destroyed.
21. अनुमतिपत्र धारक और कार्यवाही को परीक्षा के भीतर आगकाल के दौरान की जाने वाली धकियाओं से अलग होना चाहिए।
 The licensee and the employees shall be conversant with procedure to be taken during the emergency within the premises.
22. निरीक्षण या समूह अधिकारी को सभी सुविधाओं समयों पर अनुमति परीक्षा में अथवा रूप से पहुंचने दिया जायगा और यह सुनिश्चित करने के लिए कि अभिलेख और इन नियमों के उपबन्धों और सुरक्षा विनियमों को सम्बन्ध अनुपालन किया जा रहा है, अधिकारी को प्रत्येक सुविधा प्रदान की जायगी।
 Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded in the office for ascertaining that the provisions of the Act and these rules and the safety conditions are duly observed.
23. यदि अनुमतिपत्र अधिकारी या विस्फोटक नियंत्रण अनुमतिपत्र धारक को अनुमति परिवारों या मशीनों, दूरी या उपकरण में ऐसे कोई सम्मेलन या परिवर्तन या परिवर्तन करने या स्थितियों को जमाने को निश्चित रूप में सूचित कराया है जो परिवार के अंदर या बाहर या स्थितियों की सुरक्षा के लिए आवश्यक है, अनुमतिपत्र धारक स्थितियों को निष्पादित करना और विनियमित अधिकार के भीतर अनुपालन रिपोर्ट ऐसे अधिकारी को देना।
 If the licensing authority or a Controller of Explosives informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations in the licensed premises or machines, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises or persons, the holder of the licence shall execute the recommendations and report compliance within the period specified by such authority.
24. अनुमतिपत्र धारक मैगजीन में रखने और किसी के लिए बालिक विस्फोटक सूची में उल्लिखित अनुमत पैकेटों या कंपनी में प्राधिकृत विस्फोटक/अधिकारियों का सुरक्षा करने करीब।
 The licensee shall purchase authorised explosives/ fireworks or safety fuse as mentioned in the list authorized explosives from a licensed factory or company for possession and sale from the magazine.
25. निम्न जो अधिक ध्वनि उत्पन्न करने वाले विस्फोटक/पदार्थों की किसी और रखने के लिए (का जो ध्वनि की ऊंचाई से चार मीटर की दूरी पर है 123 डीबी (ए1) या 140 डीबी (सी) के बराबरित होना) (ए) बुझा (जुई हुए पदार्थ) को रखने वाले व्यक्तिगत पैकेटों के लिए उपर्युक्त उल्लिखित सीमा 5 लॉग (N) डीबी (सी) के बराबरित होना।
 The possession and sale of fire-crackers generating noise level exceeding:
 a) 125 dB(A) or 145 dB(C) at 4 meters distance from the point of bursting shall be prohibited.
 b) For individual fire-cracker constituting the series (joined fire-crackers), the above mentioned limit be reduced by 5 log₁₀ (N) dB, where N = number of crackers joined together.
26. अग्नि या विस्फोट धारा दुर्घटना या अकाल घटनाओं की बाढ़ी या जमीन दुर्घटनाओं के उपरोक्त कार्यवाही को रिपोर्ट की जायगी।
 Accidents by fire or explosion and losses, shortages or theft of explosives shall be immediately reported to the licensing authority and local officials of the area.



सत्यमेव जयते

File No: 10609
Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment
Authority(SEIAA), TAMIL NADU)



Dated 13/03/2024



To,

Sakthivel M
A M QUALITY STONE
Akkalapuram, Kothapetta Village, , KRISHNAGIRI, TAMIL NADU, 635001
manikrish14@gmail.com

Subject: Grant of Terms of Reference under the provision of the EIA Notification 2006-regarding.

Sir/Madam,

This is in reference to your application for Grant of Terms of Reference under the provision of the EIA Notification 2006-regarding in respect of project M/s. A.M. Quality Stone, Rough stone Quarry Project at over an Extent of 4.74.90Ha of Patta lands in S.F.Nos. 87/1B1B & 87/1B2B of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu State. submitted to Ministry vide proposal number SIA/TN/MIN/456285/2023 dated 21.12.2023.

2. The particulars of the proposal are as below :

(i) TOR Identification No.	TO23B0108TN5558418N
(ii) File No.	10609
(iii) Clearance Type	TOR
(iv) Category	B1
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals M/s. A.M. Quality Stone, Rough stone Quarry Project at over an Extent of 4.74.90Ha of Patta lands in S.F.Nos. 87/1B1B & 87/1B2B of
(vii) Name of Project	Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu State.
(viii) Name of Company/Organization	A M QUALITY STONE
(ix) Location of Project (District, State)	KRISHNAGIRI, TAMIL NADU
(x) Issuing Authority	SEIAA
(xii) Applicability of General Conditions	no
(xiii) Applicability of Specific Conditions	no

3. In view of the particulars given in the Para 1 above, the project proposal interalia including Form-1 were submitted to SEIAA for an appraisal by the SEAC under the provision of EIA notification 2006 and its subsequent amendments.
4. The above-mentioned proposal has been considered by SEIAA in the meeting held on 11/03/2024. The minutes of the meeting and all the Application and documents submitted [(viz. Form-1, EMP)] are available on PARIVESH portal which can be accessed by scanning the QR Code above.
5. The brief about the salient features of the project along with environment settings, as submitted by the Project proponent in Form-1, EMP Reports/presented during SEIAA are annexed to this EC as Annexure (1).
6. The SEAC, based on information & clarifications provided by the project proponent and after detailed deliberations recommended the proposal for grant of Terms of Reference under the provision of EIA Notification, 2006 and as amended thereof subject to stipulation of specific and general conditions as detailed in Annexure (2).
7. The SEIAA has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after accepting the recommendations of the SEAC hereby decided to grant Terms of Reference for instant proposal of M/s. Kousic & Co. Blue Metals under the provisions of EIA Notification, 2006 and as amended thereThe Ministry/SEIAA-TN reserves the right to stipulate additional conditions, if found necessary.
8. The Terms of Reference to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.
9. This issues with the approval of the Competent Authority.

Copy To

1. The Additional Chief Secretary to Government, Environment & Forests Department, Govt. of Tamil Nadu, Fort St. George, Chennai - 9
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD Cum-Office Complex, East Arjun Nagar, New Delhi 110032.
3. The Member Secretary, Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai-600 032.
4. Monitoring Cell, IA Division, Ministry of Environment, Forests & CC, Paryavaran Bhavan, CGO Complex, New Delhi 110003
5. The Commissioner/ Director, Department of Geology & Mining, Guindy.
6. The District Collector, Krishnagiri District.
7. The Assistant Director, Department of Geology & Mining, Krishnagiri District.
8. Stock File.

Annexure 1

Specific Terms of Reference for (Mining Of Minerals)

1. Mining

S. No	Terms of Reference
1.1	1. The proponent shall study the impact of carrying out blasting on the structures located within 500m from the cluster by carrying out Blast-Induced Ground vibration study in the any of the operating mines in the same cluster by involving any one of the reputed scientific / academic institutions - CSIR-Central Institute of Mining and Fuel Research (CIMFR), Dhanbad; NIRM, Bengaluru; IIT(ISM), Dhanbad; Anna University, Chennai; NITK, Surathkal and IIT, Madras.

S. No	Terms of Reference
	<p>2. The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building, number of residents, their profession and income, etc.</p> <p>3. The PP shall obtain Certified Compliance Report (CCR) from Integrated Regional Office, MoEF&CC, Chennai, for the earlier Environmental Clearance, if applicable.</p>

2. Seac Standard Conditions

S. No	Terms of Reference
2.1	<p>1. In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following:</p> <ul style="list-style-type: none"> (i) Original pit dimension (ii) Quantity achieved Vs EC Approved Quantity (iii) Balance Quantity as per Mineable Reserve calculated. (iv) Mined out Depth as on date Vs EC Permitted depth (v) Details of illegal/illicit mining (vi) Violation in the quarry during the past working. (vii) Quantity of material mined out outside the mine lease area (viii) Condition of Safety zone/benches (ix) Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m. <p>2. Details of habitations around the proposed mining area and latest VAO certificate regarding the location of habitations within 300m radius from the periphery of the site.</p> <p>3. The PP shall submit a detailed hydrological report indicating the impact of proposed quarrying operations on the waterbodies like lake, water tanks, etc are located within 1 km of the proposed quarry.</p> <p>4. The Proponent shall carry out Bio diversity study through reputed Institution and the same shall be included in EIA Report.</p> <p>5. The DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., up to a radius of 25 km from the proposed site.</p> <p>6. In the case of proposed lease in an existing (or old) quarry where the benches are not formed (or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall the PP shall carry out the scientific studies to assess the slope stability of the working benches to be constructed and existing quarry wall, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRM/Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus. The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining the EC.</p> <p>7. However, in case of the fresh/virgin quarries, the Proponent shall submit a conceptual 'Slope Stability Plan' for the proposed quarry during the appraisal while obtaining the EC, when the depth of the working is extended beyond 30 m below ground level.</p> <p>8. The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/I Class mines manager appointed by the proponent.</p> <p>9. The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site.</p>

S. No	Terms of Reference
	<p>10. The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidences.</p> <p>11. If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines,</p> <p>12. What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?</p> <p>13. Quantity of minerals mined out.</p> <ul style="list-style-type: none"> ● Highest production achieved in any one year ● Detail of approved depth of mining. ● Actual depth of the mining achieved earlier. ● Name of the person already mined in that leases area. ● If EC and CTO already obtained, the copy of the same shall be submitted. ● Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches. <p>14. All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/Topo sheet, topographic sheet, geomorphology, lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).</p> <p>15. The PP shall carry out Drone video survey covering the cluster, green belt, fencing, etc.,</p> <p>16. The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.</p> <p>17. The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justifications, the anticipated impacts of the mining operations on the surrounding environment, and the remedial measures for the same.</p> <p>18. The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of the Mines Act'1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.</p> <p>19. The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of groundwater pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds, etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided.</p> <p>20. The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality & flora/fauna including traffic/vehicular movement study.</p> <p>21. The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of soil health, biodiversity, air pollution, water pollution, climate change and flood control & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.</p> <p>22. Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.</p> <p>23. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to</p>

S. No	Terms of Reference
	<p>encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.</p> <p>24. Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be provided.</p> <p>25. Proximity to Areas declared as 'Critically Polluted' (or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered.</p> <p>26. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.</p> <p>27. Impact on local transport infrastructure due to the Project should be indicated.</p> <p>28. A tree survey study shall be carried out (nos., name of the species, age, diameter etc..) both within the mining lease applied area & 300m buffer zone and its management during mining activity.</p> <p>29. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.</p> <p>30. As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study, wherever possible.</p> <p>31. The purpose of Green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix-I in consultation with the DFO, State Agriculture University. The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.</p> <p>32. Taller/one year old Saplings raised in appropriate size of bags, preferably ecofriendly bags should be planted as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner</p> <p>33. A Disaster management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.</p> <p>34. A Risk Assessment and management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.</p> <p>35. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.</p> <p>36. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.</p> <p>37. The Socio-economic studies should be carried out within a 5 km buffer zone from the mining activity. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.</p> <p>38. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.</p> <p>39. Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.</p> <p>40. If any quarrying operations were carried out in the proposed quarrying site for which now the</p>

S. No	Terms of Reference
	<p>EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF&CC, Regional Office, Chennai (or) the concerned DEE/TNPCB.</p> <p>41. The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.</p> <p>42. Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the Environment (Protection) Act, 1986.</p>

Standard Terms of Reference for (Mining of minerals)

1.

S. No	Terms of Reference
1.1	An EIA-EMP Report shall be prepared for peak capacity (.....MTPA)operation in an ML/project area of.....ha based on the generic structure specified in Appendix III of the EIA Notification, 2006.
1.2	An EIA-EMP Report would be prepared for peak capacity operation to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for..... MTPA of mineral production based on approved project/Mining Plan for.....MTPA. Baseline data collection can be for any season (three months) except monsoon.
1.3	Propoer KML file with pin drop and coordinate of mine at 500-1000 m interval be provided
1.4	A Study area map of the core zone (project area) and 10 km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage pattern including rivers/streams/nullahs/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries, mines, and other polluting sources. In case of ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km study area should be given. The above details to be furnished in tabular form also
1.5	Map showing the core zone delineating the agricultural land (irrigated and un-irrigated, uncultivable land as defined in the revenue records, forest areas (as per records), along with other physical features such as water bodies, etc should be furnished.
1.6	A contour map showing the area drainage of the core zone and 25 km of the study area (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated in the separate map.
1.7	Catchment area with its drainage map of 25 km area within and outside the mine shall be provided with names, details of rivers/ riverlet system and its respective order. The map should clearly indicate drainage pattern of the catchment area with basin of major rivers. Diversion of drains/ river need eloboration in form of lengthe, quantity and quality of water to be diverted

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1.8	(Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.																																										
1.9	Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.																																										
1.10	Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.																																										
1.11	A detailed Site plan of the mine showing the proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, Stockyard, township/colony (within and adjacent to the ML), undisturbed area -if any, and landscape features such as existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification of thereof in terms of construction of embankments/bunds, proposed diversion/re-channelling of the water courses, etc., approach roads, major haul roads, etc should be indicated.																																										
1.12	<p>Original land use (agricultural land/forestland/grazing land/wasteland/water bodies) of the area should be provided as per the tables given below. Impacts of project, if any on the land use, in particular, agricultural land/forestland/grazing land/water bodies falling within the lease/project and acquired for mining operations should be analyzed. Extent of area under surface rights and under mining rights should be specified. Area under Surface Rights</p> <table border="1"> <thead> <tr> <th>S.N ML/Project Land use</th> <th>Area under Surface Rights(ha)</th> <th>Area Under Mining Rights(ha)</th> <th>Area under Both (ha)</th> </tr> </thead> <tbody> <tr> <td>1 Agricultural land</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2 Forest Land</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3 Grazing Land</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4 Settlements</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5 Others (specify)</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>S.N.</th> <th>Details</th> <th>Area (ha)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Buildings</td> <td></td> </tr> <tr> <td>2</td> <td>Infrastructure</td> <td></td> </tr> <tr> <td>3</td> <td>Roads</td> <td></td> </tr> <tr> <td>4</td> <td>Others (specify)</td> <td></td> </tr> <tr> <td></td> <td>Total</td> <td></td> </tr> </tbody> </table>	S.N ML/Project Land use	Area under Surface Rights(ha)	Area Under Mining Rights(ha)	Area under Both (ha)	1 Agricultural land				2 Forest Land				3 Grazing Land				4 Settlements				5 Others (specify)				S.N.	Details	Area (ha)	1	Buildings		2	Infrastructure		3	Roads		4	Others (specify)			Total	
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1.13	Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory																																										

S. No	Terms of Reference
	corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.
1.14	One-season (other than monsoon) primary baseline data on environmental quality - air (PM10, PM2.5, SOx, NOx and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided. The detail of NABL/ MoEF&CC certification of the respective laboratory and NABET accreditation of the consultant to be provided.
1.15	Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.
1.16	For proper baseline air quality assessment, Wind rose pattern in the area should be reviewed and accordingly location of AAMSQ shall be planned by the collection of air quality data by adequate monitoring stations in the downwind areas. Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area. In case of expansion, the displayed data of CAAQMS and its comparison with the monitoring data to be provided
1.17	A detailed traffic study along with presence of habitation in 100 mts distance from both side of road, the impact on the air quality with its proper measures and plan of action with timeline for widening of road. The project will increase the no. of vehicle along the road which will indirectly contribute to carbon emission so what will be the compensatory action plan should be clearly spell out in EIA/ EMP report.
1.18	The socio-economic study to conducted with actual survey report and a comparative assessment to be provided from the census data should be provided in EIA/ EMP report also occupational status & economic status of the study area and what economically project will contribute should be clearly mention. The study should also include the status of infrastructural facilities and amenities present in the study area and a comparative assessment with census data to be provided and to link it with the initialization and quantification of need based survey for CSR activities to be followed.
1.19	The Ecology and biodiversity study should also indicate the likely impact of change in forest area for surface infrastructural development or mining activity in relation to the climate change of that area and what will be the compensatory measure to be adopted by PP to minimize the impact of forest diversion.
1.20	Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower for the mine should be submitted.

S. No	Terms of Reference
1.21	Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted
1.22	Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
1.23	Study on land subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.
1.24	Detailed water balance should be provided. The break up of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users should be provided.
1.25	PP shall submit design details of all Air Pollution control equipment (APCEs) to be implemented as part of Environment Management Plan vis-à-vis reduction in concentration of emission for each APCEs
1.26	PP shall propose to use LNG/CNG based mining machineries and trucks for mining operation and transportation of mineral. The measures adopted to conserve energy or use of renewable sources shall be explored
1.27	PP to evaluate the green house emission gases from the mine operation/ washery plant and corresponding carbon absorption plan.
1.28	Site specific Impact assessment with its mitigation measures, Risk Assessment and Disaster Preparedness and Management Plan should be provided.
1.29	Impact of choice of mining method, technology, selected use of machinery and impact on air quality, mineral transportation, handling & storage/stockyard, etc, Impact of blasting, noise and vibrations should be provided.
1.30	Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
1.31	Details of various facilities to be provided to the workers in terms of parking, rest areas and canteen, and effluents/pollution load resulting from these activities should also be given.
1.32	The number and efficiency of mobile/static water jet, Fog cannon sprinkling system along the main mineral transportation road inside the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality should be provided.
1.33	Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the

S. No	Terms of Reference
	pre- mining status should be provided. A Plan for the ecological restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.
1.34	Adequate greenbelt nearby areas, mineral stock yard and transportation area of mineral shall be provided with details of species selected and survival rate Greenbelt development should be undertaken particularly around the transport route.
1.35	Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
1.36	Details of R&R. Detailed project specific R&R Plan with data on the existing socio- economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.
1.37	CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.
1.38	Corporate Environment Responsibility:
1.39	a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
1.40	b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
1.41	c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
1.42	d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
1.43	e) Environment Management Cell and its responsibilities to be clearly spelled out in EIA/ EMP report
1.44	f) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.
1.45	Status of any litigations/ court cases filed/pending on the project should be provided.
1.46	PP shall submit clarification from DFO that mine does not fall under corridors of any National Park and Wildlife Sanctuary with certified map showing distance of nearest sanctuary.
1.47	Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan

S. No	Terms of Reference					
	approval. NOC from Flood and Irrigation Dept. (if req.), etc. wherever applicable.					
1.48	<p>Details on the Forest Clearance should be given as per the format given:</p> <table border="0"> <tr> <td>Total ML Total Project Area Forest (ha)</td> <td>Date of FC</td> <td>Extent of Forest Land</td> <td>Balance area for which FC is yet to be obtained</td> <td>Status of appl to be diversion of forest land</td> </tr> </table> <p>If more than one provide details of each FC</p>	Total ML Total Project Area Forest (ha)	Date of FC	Extent of Forest Land	Balance area for which FC is yet to be obtained	Status of appl to be diversion of forest land
Total ML Total Project Area Forest (ha)	Date of FC	Extent of Forest Land	Balance area for which FC is yet to be obtained	Status of appl to be diversion of forest land		
1.49	In case of expansion of the proposal, the status of the work done as per mining plan and approved mine closure plan shall be detailed in EIA/ EMP report					
1.50	Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the time bound action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.					
1.51	PP shall carry out survey through drone highlighting the ground reality for atleast 10 minutes					
1.52	Detailed Chronology of the project starting from the first lease deed allotted/Block allotment/ Land acquired to its No. of renewals, CTO /CTE with details of no. renewals, previous EC(s) granted details and its compliance details, NOC details from various Govt bodies like Forest NOC(s), CGWA permissions, Power permissions, etc as per the requisites respectively to be furnished in tabular form.					
1.53	The first page of the EIA/ EMP report must mention the peak capacity production, area, detail of PP, Consultant (NABET accreditation) and Laboratory (NABL / MoEF & CC certification)					
1.54	The compliances of ToR must be properly cited with respective chapter section and page no in tabular form and also mention sequence of the respective ToR complied within the EIA-EMP report in all the chapter,s section.					

Additional Terms of Reference

SEIAA Conditions:

Standard:

Cluster Management Committee

1. Cluster Management Committee shall be framed which must include all the proponents in the cluster as members including the existing as well as proposed quarry.
2. The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc.,
3. The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.
4. Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.
5. The committee shall deliberate on risk management plan pertaining to the cluster in a holistic manner especially during

natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan.

6. The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the environmental policy devised shall be given in detail.

7. The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.

8. The committee shall furnish the Emergency Management plan within the cluster.

9. The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public.

10. The committee shall furnish an action plan to achieve sustainable development goals with reference to water, sanitation & safety.

11. The committee shall furnish the fire safety and evacuation plan in the case of fire accidents.

Impact study of mining

12. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area covering the entire mine lease period as per precise area communication order issued from reputed research institutions on the following

- a) Soil health & soil biological, physical land chemical features .
- b) Climate change leading to Droughts, Floods etc.
- c) Pollution leading to release of Greenhouse gases (GHG), rise in Temperature, & Livelihood of the local people.
- d) Possibilities of water contamination and impact on aquatic ecosystem health.
- e) Agriculture, Forestry & Traditional practices.
- f) Hydrothermal/Geothermal effect due to destruction in the Environment.
- g) Bio-geochemical processes and its foot prints including environmental stress.
- h) Sediment geochemistry in the surface streams.

Agriculture & Agro-Biodiversity

13. Impact on surrounding agricultural fields around the proposed mining Area.

14. Impact on soil flora & vegetation around the project site.

15. Details of type of vegetations including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetations all along the boundary of the proposed mining area shall committed mentioned in EMP.

16. The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.

17. Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.

18. The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.

Forests

19. The project proponent shall detailed study on impact of mining on Reserve forests free ranging wildlife.

20. The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.

21. The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.

22. The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.

Water Environment

23. Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period.

24. Erosion Control measures.

25. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies/ Rivers, & any ecological fragile areas.

26. The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and

Reservoir.

27. The project proponent shall study and furnish the details on potential fragmentation impact on natural environment, by the activities.

28. The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts.

29. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.

30. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.

Energy

31. The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilise the Energy shall be furnished.

Climate Change

32. The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities.

33. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock.

Mine Closure Plan

34. Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.

EMP

35. Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued.

36. The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan.

Risk Assessment

37. To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining.

Disaster Management Plan

38. To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid/reduce vulnerability to hazards & to cope with disaster/untoward accidents in & around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued.

Others

39. The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological sites, Structures, railway lines, roads, water bodies such as streams, odai, vaari, canal, channel, river, lake pond, tank etc.

40. As per the MoEF& CC office memorandum F.No.22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.

41. The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment. The ecological risks and impacts of plastic & microplastics on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.

Annexure 2

Details of Products & By-products

Name of the product /By-product	Product / By-product	Quantity	Unit	Mode of Transport / Transmission	Remarks (eg. CAS number)
Rough stone	Rough stone	481920	Cum	Road	Year wise

Name of the product /By-product	Product / By-product	Quantity	Unit	Mode of Transport / Transmission	Remarks (eg. CAS number)
					Production in m3



Signature Not Verified

Digitally Signed by : A P Rahul Nadh IAS
Member Secretary, SEIAA

Date: 13/03/2024

From

Dr. S.Vediappan, M.Sc.,Ph.d.,
Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

To

M/s. A.M.Quality Stone,
S.F.No.87/1B1 & 87/1B2,
Akkalapuram,
Kothapetta Village,
Krishnagiri - 635001.

Roc.No.1314/2023/Mines Dated: 22.11.2023

Sir,

Sub: Mines and Minerals - Minor Mineral - Rough Stone -
Krishnagiri District - Krishnagiri Taluk - Kothapetta Village-
Patta land in S.F.No. 87/1B1B & 87/1B2B Over an extent of
4.74.90 Hects - Application preferred by M/s. A.M.Quality
Stone - Other quarries situated in 500 mtrs radial distance -
Details furnished - reg.

- Ref:**
1. Application prepared by M/s. A.M.Quality Stone,
S.F.No.87/1B1 & 87/1B2, Akkalapuram, Kothapetta Village,
Krishnagiri District dated: 06.06.2023.
 2. This Office Letter No. 1314/2023/Mines dated:
12.10.2023.
 3. Mining plan approved by the Deputy Director of Geology
and Mining, Krishnagiri vide Letter.No.1314/2023/ Mines
dated: 10.11.2023.
 4. M/s. A.M.Quality Stone letter dated: 18.11.2023.

Kind attention is invited to the references cited above.

2. M/s. A.M.Quality Stone has been preferred an application for quarrying Rough stone over an extent of 4.74.90 Hects of patta land in S.F.No. 87/1B1B & 87/1B2B in Kothapetta Village, Krishnagiri Taluk, Krishnagiri District for a period of 10 year under the provisions of Rule 19 (1) of Tamil Nadu Minor Mineral Concession Rules, 1959. In this regard, the precise area communication has been issued to the applicant for the grant of lease for a period of 05 years only vide letter dated: 12.10.2023 with a direction to submit approved mining plan and Environment Clearance.

3. Accordingly, M/s. A.M.Quality Stone had submitted 03 copies of draft Mining Plan vide letter dated: 02.11.2023 and the same has been examined in details and approved by Deputy Director of Geology and Mining, Krishnagiri vide Letter.No.1314/2023/ Mines dated: 10.11.2023

4) In this connection, M/s. A.M.Quality Stone has requested vide letter dated: 18.11.2023 to issue the details of other quarries situated within 500 mts radial distance from the subject quarry is furnished as follows.

I. Details of Existing quarries.

Sl. No	Name of the Lessee	Village	SF.No	Extent in Hect	GO.No./Proceeding No. & Date	Lease Period
1	A.M.Quality Stone, S.F.No.87/1B1 & 87/1B2, Akkalapuram, Kothapetta Village, Krishnagiri - 635001.	Krishnagiri Taluk, kothapetta Village	87/1B1B & 87/1B2B	4.74.90	Roc.No.1314/2023 /M Dated 10.11.2023	Applied Area (Instant Proposal)
2	M/s.MA Quality Stone, No.58-B, Gandhi Nagar, Krishnagiri Taluk and District 635001	Krishnagiri Taluk, kothapetta Village	87/1B2 (part)	3.70.0	Roc.No.1179/2020 /M dated:22.02.2021	23.11.2022 to 22.11.2032
3	Tmt.K.M.Vijaya W/o.Madhinzhan, No.58-B Gandhi Nagar, Krishnagiri Dt.	Krishnagiri Taluk, kothapetta Village	78/1B (part)	4.00.0	Roc.No.419/2018/ M dated:30.05.2018	30.05.2018 to 29.05.2023 Extended for another 5 years.
4	M/s.Devarnjaa M-Sand, No.58-B, Gandhi Nagar, Krishnagiri Taluk and District 635001	Krishnagiri Taluk, kothapetta Village	78/1A (part), 78/1B (Part)	4.00.0	Roc.No.418/2018/ M dated:30.05.2018	31.05.2018 to 30.05.2023 Extended for another 5 years.

II. Details of abandoned/Old quarries.

Sl. No.	Name of the lessee	ROC.NO. dated	Village & Taluk	S.F No.	Extent in Het	Lease period.
1	----- Nil -----					

III. Details of other Proposed/applied quarries

Sl No.	Name of the lessee	ROC.NO. dated	Village & Taluk	S.F No.	Extent in Hec	Lease period
1			Nd			

Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

Copy to :-

The Chairman, Tamil Nadu State Environment
Impact Assessment Authority,
3rd Floor, Panakal Maligai,
No. 1 Jeenes Road, Saidapet, Chennai -15.

Handwritten signature

TOPOGRAPHICAL VIEW OF KOTHAPETTA
ROUGH STONE QUARRY LEASE AREA



Name of the Lessee : **A.M. Quality Stone,**
Address : S.F.No.87/1B1 & 87/1B2,
Akkalapuram, Kothapetta Village,
Krishnagiri Taluk & District - 635 001

LOCATION DETAILS

Extent : 4.74.90ha
S.F.No. : 87/1B1B & 87/1B2B
Village : Kothapetta
Taluk : Krishnagiri
District : Krishnagiri
State : Tamil Nadu

Signature of the lessee
For A.M. Quality Stone

(M. Kowshik Dhev)
Managing Partner


06/12/2023
(Village Administrative Office)
Village Administrative Office
P.O. KOTHAPETTA
KRISHNAGIRI TALUK & DISTRICT

06-06-2023

கிஷ்ணகிரி

கிராம நிர்வாக அலுவலர் சான்று

கிஷ்ணகிரி மாவட்டம் மீனாம்பட்டி வட்டம்,
 ரிகாத்தபேட்டா கிராமம் கரடு, அக்காவுரம்
 பகுதியில் A.M. குமாரவேலு கிழவன் என்ப
 தனியார் கல் குளம் கட்டி சான்று எண்
 87/1B1B மீனாம்பட்டி 87/1B2B - ன் மொத்தப்பரப்பு
 4.74.90 ரிகாத்தபேட்டாவில் உள்ளது. மேற்படி
 ரிகாத்தபேட்டா கிராம சபை சான்றிதழில் அளவளவு
 கல் குளம் கட்டி சான்று எண் 300 ரூபாய்
 ரிகாத்தபேட்டா கிஷ்ணகிரி பகுதி, பள்ளி,
 கல் குளம், வளாகம், கோயில் கல், பொதுமக்கள்
 அமைச்சர், புறநகர் சிவில் நகராட்சி
 சான்று எண் சான்று எண் சான்று எண்


 Village Administrative Officer
 2, KOTHA PETTA
 KRISHNAGIRI, K. & C.

From

Dr.S.Vediappan,M.Sc.,Ph.D.,
Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

To

M/s. A.M.Quality Stone,
S.F.No.87/1B1 & 87/1B2,
Akkalapuram,
Kothapetta Village,
Krishnagiri - 635001.

Rc.No. 1314/2023/Mines Dated: 10.11.2023.

Sir,

Sub: Mines and Minerals - Minor Mineral - Rough Stone - Krishnagiri District - Krishnagiri Taluk - Kothapetta Village- Patta land in S.F.No. 87/1B1B & 87/1B2B Over an extent of 4.74.90 Hects - Application preferred by M/s. A.M.Quality Stone - Draft Mining Plan submitted - Approved - reg.

Ref: 1. Application prepared by M/s. A.M.Quality Stone, S.F.No.87/1B1 & 87/1B2, Akkalapuram, Kothapetta Village, Krishnagiri District dated: 06.06.2023.
2. This Office Letter No. 1314/2023/Mines dated: 12.10.2023.
3. Draft Mining plan submitted by M/s. A.M.Quality Stone, dated: 02.11.2023.

Kind attention is invited to the references cited above.

2. M/s. A.M.Quality Stone has been preferred an application for quarrying Rough stone over an extent of 4.74.90 Hects of patta land in S.F.No. 87/1B1B & 87/1B2B in Kothapetta Village, Krishnagiri Taluk, Krishnagiri District for a period of 10 year under the provisions of Rule 19 (1) of Tamil Nadu Minor Mineral Concession Rules, 1959. In this regard, the precise area communication has been issued to the applicant for the grant of lease for a period of 05 years only vide letter dated: 12.10.2023 with a direction to submit approved mining plan and Environment Clearance.

3. Accordingly, M/s. A.M.Quality Stone had submitted 03 copies of draft Mining Plan vide letter dated: 02.11.2023 and the same has been examined in details and it is found correct.

H. S. S. S. S.

4. As per the Mining Plan the year wise production for the proposed first five years are as follows.

First Five Years	Year	Recoverable Reserves (m³) @ 100%	Top Soil in (m³)
	1 st Year	117530	8706
	2 nd year	133980	
	3 rd year	67815	
	4 th year	60865	
	5 th year	101730	
	Total	481920	8706

5. Hence, the power delegated under Rule 41 of TNMMCR, 1959 and as per the guidelines/instructions issued by the Commissioner of Geology and Mining, vide letter Rc.No.3868/LC/2012 dated:19.11.2012, the said mining plan submitted by M/s. A.M.Quality Stone is hereby approved subject to the following conditions.

i) That the mining plan is approved without prejudice to any other law applicable to the quarry lease from time to time whether such laws are made by the Central Government, State Government or any other authority.

ii) This approval of the mining plan does not in any way imply the approval of the Government in terms of any other provisions of Mines and Minerals Development and Regulation) Act 1957, or any other connected laws including Forest (Conservation) Act 1957, or any other connected Laws industry Forest (Conservation) Act 1980, Forest Conservation Rules 1981 Environment protection Act 1980, Indian Explosive Act 1884 (Central Act IV of 1884) and the rules made there under, Minor Mineral Conservation and Development Rules, and The Tamil Nadu Minor Mineral Concession rules, 1959.


iii) That the mining plan is approved without prejudice to any other order or directions from any court of competent jurisdiction.

H. S. Srinivasan

iv) All the conditions mentioned in the precise order letter should be followed during quarry operation as per rules.

v) The applicant should get prior Environmental clearance from the appropriate authority and should submit it to the District Collector, Krishnagiri.

vi) Every Mining Plan duly approved under rule 4109 of TNMMCR, 1959 shall be valid for a period of five years.


Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

Copy submitted to : The Commissionner,
Dept of Geology and Mining,
Guindy, Chennai -32.

MINING PLAN

FOR

GRANT OF ROUGH STONE QUARRY LEASE IN PATTALAND

TOTAL LEASE GRANTED PERIOD 5 YEARS

PERIOD OF MINING 5 YEARS

(Prepared Under Rules 41 & 42 as amended in Tamil Nadu Minor Mineral Concession Rules, 1959)

LOCATION OF THE APPLIED AREA

EXTENT : 4.74.90Ha.
S.F. Nos : 87/1B1B & 87/1B2B
VILLAGE : KOTHAPETTA.
TALUK : KRISHNAGIRI.
DISTRICT : KRISHNAGIRI.
STATE : TAMIL NADU.

APPLICANT

M/s. A.M. QUALITY STONE,
S.FNos.87/1B1 & 87/1B2,
AKKALAPURAM,
KOTHAPETTA VILLAGE,
KRISHNAGIRI TALUK & DISTRICT- 635 001.

PREPARED BY:

S. DHANASEKAR, M.Sc. (Geol),
QUALIFIED PERSON,
NO. 5/30-7 B, AVVAI NAGAR,
PONKUMAR MINES ROAD,
JAGIR AMMAPALAYAM,
SALEM DISTRICT – 636 302.
Email: geodhana@yahoo.co.in
CELL: 98946-28970 & 73733-74702.



CONTENTS



SL. NO.	DESCRIPTION	PAGE NO.
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13.0	Any Other Details Intend to Furnish by the Applicant	29



ANNEXURES

SL. NO.	DESCRIPTION	ANNEXURE NO.
1.	Copy of Precise Area Communication Letter	I
2.	Copy of FMB	II
3.	Copy of Combined Sketch	III
4.	Copy of Patta & 'A' Register	IV
5.	Copy of Land Consent Documents	V
6.	Copy of Firm Registration	VI
7.	Copy of Partnership Deed	VII
8.	Copy of Managing Partner Id Proof	VIII
9.	Copy of Qualification Certificate	IX
10.	Copy of Experience Certificate	X
11.	Copy of Lease Area Photos	XI

LIST OF PLATES



SL. NO.	DESCRIPTION	PLATE NO.	SCALE
1	Location Plan	I	Not to Scale
2	Route Map	IA	Not to Scale
3	Topo Sheet Map of the Lease Area	IB	1:50,000
4	Satellite Image (Lease Area)	IC	1:1000
5	Satellite Image (500m Radius)	ID	1:5000
6	Mine Lease Plan	II	1:1000
7	Surface Plan & Geological Plan	III	1:1000
8	Geological Sections	III-A & B	Hor:1:1000 Ver: 1: 500
9	Year Wise Development and Production Plan	IV	1:1000
10	Year Wise Development And Production Sections	IV- A & B	Hor:1:1000 Ver: 1: 500
11	Mine Layout Plan, Land Use Pattern & Afforestation Plan	V	1:1000
12	Environment Plan	VI	1:5000
13	Conceptual/Final Mine Closure Plan	VII	1:1000
14	Conceptual/Final Mine Closure Sections	VII- A & B	Hor:1:1000 Ver: 1: 500
15	Progressive Mine Closure Plan	VIII	1:1000

M/s. A.M. Quality Stone,
S.F.Nos.87/1B1 & 87/1B2,
Akkalapuram,
Kothapetta Village,
Krishnagiri Taluk & District - 635 001.



CONSENT LETTER FROM THE APPLICANT

I hereby give my consent for preparing the Mining Plan in respect of **Rough Stone** quarry over an extent of **4.74.90Hectares** of **Patta Land** in S.F.Nos.87/1B1B & 87/1B2B of **Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu State** to **Shri. S. Dhanasekar, M.Sc., Qualified Person.**

I request the Deputy Director, Department of Geology and Mining, KRISHNAGIRI District to make further correspondence regarding modifications if any in the Mining Plan with the said Qualified Person on this following address.

S.DHANASEKAR, M.Sc.,

Qualified Person

No.5/30-7B, Avvai Nagar,

Ponkumar Mines Road,

Jagir Ammapalayam,

Salem District - 636302.

E-Mail: geodhana@yahoo.co.in

Cell: 98946-28970.

I hereby undertake that all modifications so made in the Mining Plan by the Qualified Person may be deemed to have been made with my knowledge and consent and shall be acceptable to me and binding on me in all respects.

For M/s. A.M. Quality Stone,

Place: Krishnagiri

Date:

M/s. A.M. Quality Stone,
S.F.Nos.87/1B1 & 87/1B2,
Akkalapuram,
Kothapetta Village,
Krishnagiri Taluk & District - 635 001.



DECLARATION

I hereby declare that the Mining Plan in respect of **Rough Stone** quarry over an extent of **4.74.90 Hectares** of **Patta Land** in S.F.Nos.87/1B1B & 87/1B2B of **Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu State** has been prepared with my consultation and I have understood the contents and agree to implement the same in accordance with the Mining Laws.

For M/s. A.M. Quality Stone,

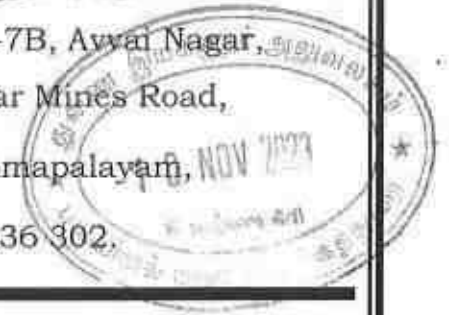
H. Kowsikumar

Place: Krishnagiri

Date:

S. Dhanasekar.M.Sc.,(Geol),
Qualified Person,

No.5/30-7B, Ayyai Nagar,
Ponkumar Mines Road,
Jagir Ammapalayam,
Salem- 636 302.




CERTIFICATE

This is to certify that, the provisions of Minor Minerals Conservation and Development Rules, 2010 (MMCDR) have been observed in the Mining Plan for the grant of **Rough Stone** quarry lease over an extent of **4.74.90Hectares** of **Patta Land** in **S.F.Nos.87/1B1B & 87/1B2B** of **Kothapetta** Village, **Krishnagiri** Taluk, **Krishnagiri** District, **Tamil Nadu** State obtained by **M/s. A.M. Quality Stone**.

Wherever specific permission / exemptions / relaxations or approvals are required, the Applicant will approach the concerned authorities of State and Central Governments for obtaining such permissions etc.

Certified


Signature of Qualified Person,
S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

Place: SALEM

Date:

S. Dhanasekar.M.Sc.,(Geol),

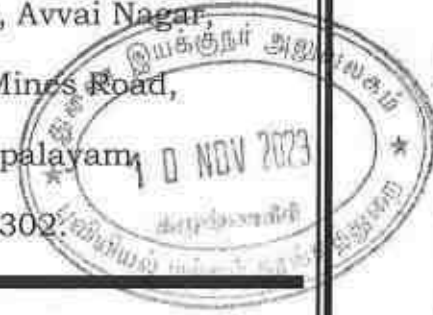
Qualified Person,

No.5/30-7B, Avvai Nagar,

Ponkumar Mines Road,

Jagir Ammapalayam,

Salem- 636 302.



CERTIFICATE

This is to certify that during preparation of Mining Plan for **Rough Stone** quarry over an extent of **4.74.90 Hectares** of **Patta Land** in **S.F.Nos.87/1B1B & 87/1B2B** of **Kothapetta** Village, **Krishnagiri** Taluk, **Krishnagiri** District, **Tamil Nadu** State for **M/s. A.M. Quality Stone**, covers all the provisions of Mines Act, Rules, and Regulations etc made there under and whenever specific permission are required, the Applicant will approach the Director General of Mines Safety, Chennai. The standards prescribed by DGMS in respect of Mines Health will be strictly implemented.

Certified


Signature of Qualified Person,
S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

Place: SALEM

Date:

MINING PLAN FOR MINOR MINERALS
ROUGH STONE QUARRY
TOTAL LEASE GRANTED PERIOD 5 YEARS
PERIOD OF MINING 5 YEARS



Over an extent of 4.74.9 Hectares of Patta Land in S.F.Nos.87/1B1B & 87/1B2B of
Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu State.

(Prepared Under Rules 41 & 42 as amended in Tamil Nadu Minor Mineral Concession
Rules, 1959)

1.0 INTRODUCTION :

1. M/s. A.M. Quality Stone, having its registered office at S.F.Nos.87/1B1 & 87/1B2, Akkalapuram, Kothapetta Village, Krishnagiri Taluk & District -635 001, has obtained quarry lease for **Rough Stone** over an extent of 4.74.90 Hectares of Patta Land in S.F.Nos.87/1B1B & 87/1B2B of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu State for a period of Five Years.
2. The Deputy Director, Krishnagiri in his letter **Rc. No. 1314/2023/Minerals dated: 12.10.2023** directed the applicant to produce approved Mining Plan and Environmental Clearance certificate from the State Environment Impact Assessment Authority (SEIAA) for the grant of quarry lease for the applied area.
3. Accordingly, Mining Plan is prepared under Rules 41 & 42 as amended in Tamil Nadu Minor Mineral Concession Rules, 1959 by incorporating the conditions imposed in the precise area communication letter and by incorporating all the details proposed in the letter to obtain environmental clearance from State Environment Impact Assessment Authority.
4. In the above circumstances, the mining plan has been prepared for the Applicant **M/s. A.M. Quality Stone**, for approval and subsequent submission of Form-I and Pre-Feasibility report to obtain environmental clearance from the SEIAA of Tamil Nadu.
5. This Mining Plan is prepared for the Rough Stone Quarry for the period of **Five Years** by considering the TNMMCR 1959, and as per the EIA Notification 2006 and subsequent amendments and judgments.
6. The Geological Reserves is estimated as **811453M³** and Mineable & recoverable Reserves is estimated as **481920M³** of **Rough Stone** after leaving necessary safety distance from the lease boundary as indicated while granting the quarry lease Proceedings and relevant mining laws in force.


S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

7. The proposed production scheduled for the Five years is estimated as 481920M³ of **Rough Stone** Proposed average annual production of Rough stone 96384M³

8. Estimated Life of the Quarry

Total Mineable ROM	= 481920 M ³
Recoverable Reserves @ 100%	= 481920 M ³
Average production per year	= 96384 M ³
Estimated Life of the Quarry	= 481920 / 96384 = 5.0 years

Life = 5.0 years

The Life of mine may change depend upon the prospecting results, rate of production and the extent of mechanization done by the applicant in near future.

9. Environmental parameters,

- i) There is no interstate boundary around 10Kms radius.
- ii) There is no wild life animal sanctuary within 10Kms radius form the project site area under the Wildlife (Protection) Act, 1972. Therefore the project seeks clearance only from State Environment Impact Assessment Authority (SEIAA), under B2 Category.

10. Environmental measures already adopted are,

- i) Dust Control at source while drilling and blasting,
- ii) Dust suppression at loading point and transport haul roads,
- iii) Noise Control in blasting, control of fly rock missiles and vibration by doing peak particle velocity with in standard as prescribed by the DGMS and MoEF.
- iv) Unnecessary land degradation should be avoided or damaged land should be reclaimed or rehabilitated.
- v) Uneven rat hole mining is avoided and follow scientific and systematic mining by safe bench system of open cast mining.
- vi) Mining near major fracture zones already avoided to control ground water fluctuation in the adjacent agricultural lands.
- vii) Emission test of vehicles should be in stack maintain minimum emission level of flue gases.
- viii) Noise level should not exceed 80db and the vehicles use only permitted Air Horn while on road near residential areas.



- ix) Safety zones as prescribed by the Department of Geology and Mining from adjacent infrastructures should be strictly adhering to.
- x) And any other conditions as stipulated by the concerned authorities will be followed to protect the environment.



2.0 EXECUTIVE SUMMARY:

a.	Name of the Village	: Kothapetta
b.	Name of the Panchayat / Union	: Kothapetta / Krishnagiri
c.	The proposed total Mineable Reserves	: 481920M³
d.	The proposed quantity of reserves (level of production) for Five Years to be mined is (Recoverable reserves)	: 481920M³
e.	Total extent of the area	: 4.74.90Ha
f.	Proposed Period of mining	: Five Years
g.	Proposed Depth of mining	: Total Depth-45m
h.	Existing Pit Dimension	: Pit- I = 19730 Sq.mt X 15m Depth Pit- II = 10420 Sqmt X 7m Depth
i.	Average Production Per Year	: 96384M³
j.	Method of mining / level of mechanization	: Opencast, Semi-mechanized Mining with a bench height of 5m and bench width of 5m is proposed.
k.	Types of Machineries used in the quarry	: i) Compressor with jack hammer. ii) Excavator of 0.90Cbm bucket Capacity.
l.	Cost of the Project	
	a. Fixed Cost	Rs. 50,12,000/-
	b. Operational Cost	Rs. 30,00,000/-
	c. EMP Cost	Rs. 3,80,000/-

m.	The Applied lease area is bounded by four corners and the coordinates are	:	Toposheet No. 57 – L/2
	Latitude	:	12° 33' 05.33" N to 12° 32' 58.37" N
	Longitude	:	78° 12' 53.41" E to 78° 12' 52.97" E
	North East	:	12° 33' 05.33" N 78° 12' 53.41" E
	South East	:	12° 32' 59.76" N 78° 12' 59.44" E
	North West	:	12° 33' 04.48" N 78° 12' 47.51" E
	South West	:	12° 32' 58.37" N 78° 12' 52.97" E

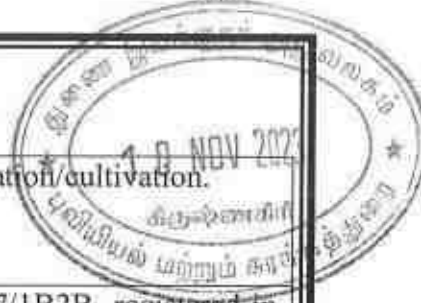


3.0. GENERAL INFORMATION:

3.1	a.	Name of the Applicant	:	M/s. A.M. Quality Stone,
	b.	Address of the Applicant with phone No and e-mail id if any	:	M/s. A.M. Quality Stone, S.FNos.87/1B1 & 87/1B2, Akkalapuram, Kothapetta Village, Krishnagiri Taluk & District- 635 001.
	c.	Status of the Applicant	:	Partnership firm
3.2	a.	Mineral Which the Applicant intends to mine	:	Rough Stone
	b.	Precise area letter	:	Roc. No. 1314/2023/Minerals dated: 12.10.2023
	c.	Period of permission	:	5 Years
	e.	Name and Address of the Qualified Person preparing Mining Plan	:	S.Dhanasekar, M.Sc., Qualified Person No.5/30-7B, Avvai Nagar, Ponkumar Mines Road, Jagir Ammapalayam, Salem District - 636302. E-Mail: geodhana@yahoo.co.in Cell: 98946-28970 & 73733-74702

4.0 LOCATION: DETAILS AREA:

State	District	Panchayat / Union	Taluk	Village	S.F.Nos	Extent in Hectare
Tamil Nadu	Krishnagiri	Kothapetta/ Krishnagiri	Krishnagiri	Kothapetta	87/1B1B	2.50.00Ha
					87/1B2B	2.24.90Ha
					TOTAL =	4.74.90Ha



b.	Classification of the Area (Ryotwari / Poramboke / others)	:	It is a Patta Land, which is not fit for vegetation/cultivation.
c.	Ownership / Occupancy of the Applied Lease area (Surface rights)	:	It is a Patta Land in S.F. No.87/1B1B & 87/1B2B registered in the name of Mrs. K.M. Vijaya, W/o. D. Mathiyazhagan, vide Patta No. 1870. Pattadhar Mrs. K.M. Vijaya gave consent to the applicant firm. Hence the applicant firm has surface rights over the area.
d.	Toposheet No. with Latitude and Longitude	:	Toposheet No. 57 – L/2 : 12° 33' 05.33" N to 12° 32' 58.37" N : 78° 12' 53.41" E to 78° 12' 52.97" E
e.	Existence of Public Road / Railway line if any nearby the area and approximate distance	:	Quarry site is located in Northern side at a distance of 4.0kms from Krishnagiri.

PART - A

5.0 GEOLOGY AND MINERAL RESERVES:

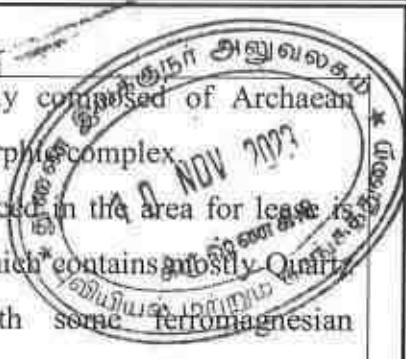
5.1	a.	Topography	:	<ol style="list-style-type: none"> 1. The area is situated almost an elevated terrain sloping towards west covered with Rough Stone which does not sustain any type of vegetation. The altitude of the area is 565m above MSL. 2. No major river is found nearby the lease area. 3. Water table is noticed at a depth of 67m from below the surface in the adjacent open well and bore well. 4. Temperature of the area is reported to be 18⁰C to a maximum of 38⁰C during summer. 5. Rainfall of this area is about 800mm to 900 mm during the monsoons in a year.
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b.	<p>Infrastructures nearby the Applied Lease area.</p> <p>1. Post Office</p> <p>2. Police Station</p> <p>3. G.H</p> <p>4. Fire service</p> <p>5. Railway Station</p> <p>6. School</p> <p>7. Airport</p> <p>8. Seaport</p>	<p>: Krishnagiri – 2.8kms</p> <p>: Krishnagiri – 4.5kms</p> <p>: Krishnagiri – 5.8kms</p> <p>: Krishnagiri – 3.0kms</p> <p>: Rayakottai – 33.8kms</p> <p>: Chinnamelupalli – 1.0kms</p> <p>: Bangalore – 125.0kms</p> <p>: Chennai – 260.0kms</p>
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c. Regional Geology : **Krishnagiri** District is underlined by the wide range of metamorphic rocks of peninsular gneissic complex. These rocks are extensively weathered and overlain by the recent valley fills and alluvium at places. The geological formations found in the District are Archaean rocks like Gneisses, Granites, Charnockite basic granulites and calc-gneisses. The younger formations are Quartz veins and pegmatite. The generalized stratigraphic succession of the geological formations met within this District is as follows.

	Age	Rock Formation
1.	Recent to Sub recent	Soil, Alluvium
2.	Archaean	Granites, basic granulites, Peninsular Gneiss, Calc Gneiss and Charnockites



d. Geology of the Lease Area

1. The area is mainly composed of Archaean crystalline metamorphic complex
2. The rock type noticed in the area for lease is **Granite Gneiss** which contains mostly Quartz and Feldspar with some ferromagnesian minerals. The Granite Gneiss is part of peninsular Gneisses, a high grade metamorphic rock.
3. The general trend of formation is N – S and dip towards W-70⁰.

The general geological succession of the area is given under

	Age	Rock Formation
1.	Recent to Sub recent	Soil, Alluvium
2.	Archaean	Charnockites
3.	Archaean	Peninsular Gneiss, and Calc Gneiss

5.2 Details of Exploration already carried out if any

: Since the **Rough Stone** is seen from the Surface itself, No needed to exploration. However, the area was personally examined by the Geologist who prepared the Mining Plan.

5.3 a. Already excavated in pit dimensions

: **Pit- I = 19730 Sq.mt X 15m Depth**
Pit- II = 10420 Sqmt X 7m Depth

b. Geological Resources:
Top Soil:

The Thickness of Top Soil in this area is **1.0m** and the total volume of Topsoil will be **9469m³**.

Rough Stone :

The Available Geological Resources is estimated as **811453m³** respectively, at the rate of 100% Recovery upto the permissible depth. The Geological reserve of Rough stone and Topsoil is calculated upto a **Total Depth-45m (1m Top Soil + 44m Rough Stone)**.



GEOLOGICAL RESERVES							
Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Top Soil Reserves in m3 @ 100%	
XY-AB	I	109	73	1			
	II	5	1	5	25	25	
	III	28	1	5	140	140	
	IV	57	73	5	20805	20805	
	V	87	73	5	31755	31755	
	VI	109	73	5	39785	39785	
	VII	109	73	5	39785	39785	
	VIII	125	73	5	45625	45625	
	IX	125	73	5	45625	45625	
TOTAL					223545	223545	7957
XY-CD	I	28	54	1			
	II	104	73	4	30368	30368	
	III	122	94	5	57340	57340	
	IV	122	112	5	68320	68320	
	V	122	118	5	71980	71980	
	VI	122	118	5	71980	71980	
	VII	122	118	5	71980	71980	
	VIII	122	118	5	71980	71980	
	IX	122	118	5	71980	71980	
	X	122	118	5	71980	71980	
TOTAL					587908	587908	1512
GRAND TOTAL					811453	811453	9469

c. Mineable Reserves:

The Mineable reserves are calculated by deducting 7.5m safety distance for Patta land and Bench Loss.

Top Soil :

The Thickness of Topsoil in this area is 1.0m and the total volume of Topsoil will be **8706m³**.

Rough Stone :

The mineable reserves and the Recoverable Reserves are **481920m³** respectively, at the rate of 100% recovery upto the permissible depth. The Mineable reserve of Rough stone and Topsoil is calculated upto a **Total Depth-45m (1m Topsoil + 45m Rough Stone)**.

MINEABLE RESERVES							
Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Mineable Reserves in m ³ @ 100%	Topsoil in m ³
XY-AB	I	109	66	1			
	II	5	1	5	25	25	
	III	28	1	5	140	140	
	IV	57	65	5	18525	18525	
	V	87	60	5	26100	26100	
	VI	109	55	5	29975	29975	
	VII	109	50	5	27250	27250	
	VIII	111	45	5	24975	24975	
	IX	106	40	5	21200	21200	
TOTAL					148190	148190	7194
XY-CD	I	28	54	1			1512
	II	95	65	4	24700	24700	
	III	108	81	5	43740	43740	
	IV	103	95	5	48925	48925	
	V	98	96	5	47040	47040	
	VI	93	91	5	42315	42315	
	VII	88	86	5	37840	37840	
	VIII	83	81	5	33615	33615	
	IX	78	76	5	29640	29640	
	X	73	71	5	25915	25915	
TOTAL					333730	333730	1512
GRAND TOTAL					481920	481920	8706

6.0 MINING:

6.1	Method of Mining	:	<ol style="list-style-type: none"> 1. Opencast method of semi mechanized mining is being adopted to extract Rough Stone of required size. 2. Machineries like Tractor mounted compressor attached with Jack hammers is used for drilling and blasting. Excavators are used for quarrying of Rough Stone and Tippers / Lorries are used for the transportation of Rough Stone to the destination.
6.2	Mode of Working	:	It is a semi mechanized quarrying operation using shot hole drilling with the help of compressor and jack hammers and smooth blasting. Rough Stone are removed using Hydraulic excavator and loaded directly to the tippers and transported to the needy buyers.

6.3	Proposed bench height & Width	: Bench height = 5mts. Bench width = 5mts.
6.4	Details of Overburden / Mineral Production proposed for Five Year.	: Topsoil/ Overburden production details follows: The entire lease area is covered 1.0m of Topsoil and the estimated quantity of Topsoil is 8706m ³ . Topsoil formation will be removed and dumped at all side boundary barrier of the lease area. It will be utilized for afforestation and road low lying areas.



Year wise reserves calculations :

Rough stone & Topsoil production details as follows:

The proposed rate of production of **Rough Stone** is estimated as 481920m³ & **Top Soil** is about 8706m³ for five years. The average proposed rate of production of **Rough Stone** is about 96384m³ per year at the rate of 100% recovery upto the permissible depth. Reserves depth is Calculated upto 45m (1m Topsoil + 44m Rough Stone).

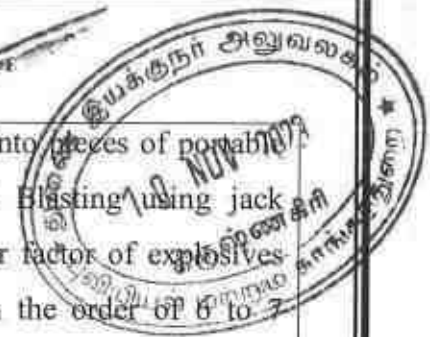
YEARWISE DEVELOPMENT AND PRODUCTION								
Year	Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Recoverable Reserve in m3 @ 100%	Top Soil in m3
I-YEAR	XY-AB	I	109	66	1			7194
		II	5	1	5	25	25	
		III	28	1	5	140	140	
	XY-CD	I	28	54	1			1512
		II	95	65	4	24700	24700	
		III	108	81	5	43740	43740	
		IV	103	95	5	48925	48925	
Total						117530	117530	8706
II-YEAR	XY-AB	IV	57	65	5	18525	18525	
		V	87	60	5	26100	26100	
	XY-CD	V	98	96	5	47040	47040	
		VI	93	91	5	42315	42315	
	Total						133980	133980
III-YEAR	XY-AB	VI	109	55	5	29975	29975	
	XY-CD	VII	88	86	5	37840	37840	
		Total						67815
IV-YEAR	XY-AB	VII			5	27250	27250	
	XY-CD	VIII	83	81	5	33615	33615	
		Total						60865
V-YEAR	XY-AB	VIII	111	45	5	24975	24975	
		IX	106	40	5	21200	21200	
	XY-CD	IX	78	76	5	29640	29640	
		X	73	71	5	25915	25915	
	Total						101730	101730
GRAND TOTAL						481920	481920	8706

6.5	a. Mining	<p>: Drilling of shot holes will be carried out using Compressor and jack hammer. Depth of holes shall be 1 to 2m bench height and spacing shall be 0.75m and burden shall be 0.60m from the preface. Details of drilling equipments are given belows</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Nos</th> <th>Dia of hole</th> <th>Size / Capacity</th> <th>Make</th> <th>Motive power</th> <th>H.P</th> </tr> </thead> <tbody> <tr> <td>Jack Hammer</td> <td>4</td> <td>25.5 mm</td> <td>Hand held</td> <td>Atlas copco 2Nos</td> <td>Diesel</td> <td>60</td> </tr> </tbody> </table>	Type	Nos	Dia of hole	Size / Capacity	Make	Motive power	H.P	Jack Hammer	4	25.5 mm	Hand held	Atlas copco 2Nos	Diesel	60
Type	Nos	Dia of hole	Size / Capacity	Make	Motive power	H.P										
Jack Hammer	4	25.5 mm	Hand held	Atlas copco 2Nos	Diesel	60										
	b. Loading	<p>: Loading of waste and rough stone is being carried out by Excavator into 10 tonne capacity tippers from the working place periodically. Details of loading equipment are given as under.</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Nos</th> <th>Bucket Capacity (MT)</th> <th>Make</th> <th>Motive power</th> <th>H.P</th> </tr> </thead> <tbody> <tr> <td>Hydraulic excavator</td> <td>3</td> <td>1.2 M³</td> <td>L&T or Ex200</td> <td>Diesel</td> <td>120</td> </tr> </tbody> </table>	Type	Nos	Bucket Capacity (MT)	Make	Motive power	H.P	Hydraulic excavator	3	1.2 M ³	L&T or Ex200	Diesel	120		
Type	Nos	Bucket Capacity (MT)	Make	Motive power	H.P											
Hydraulic excavator	3	1.2 M ³	L&T or Ex200	Diesel	120											
	c. Transportation	<p>: Transport of raw materials and waste shall be done by 10 tonnes tipper</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Nos</th> <th>Size / Capacity</th> <th>Make</th> <th>Motive power</th> <th>H.P.</th> </tr> </thead> <tbody> <tr> <td>Tipper</td> <td>3</td> <td>10 M.T</td> <td>Ashok Leyland</td> <td>Diesel</td> <td>110</td> </tr> </tbody> </table>	Type	Nos	Size / Capacity	Make	Motive power	H.P.	Tipper	3	10 M.T	Ashok Leyland	Diesel	110		
Type	Nos	Size / Capacity	Make	Motive power	H.P.											
Tipper	3	10 M.T	Ashok Leyland	Diesel	110											
	<p>d. Energy:</p> <p>Electricity for mines and lights only at nights (working is restricted on day time only between 8Am to 4Pm). Diesel (HSD) will be used for quarrying machines around 386986 liters for the entire project life. Diesel will be brought from nearby diesel pumps. No power is required for the project. Lightings on the night is taken from nearby electric poles after obtaining permission from concerned authorities.</p> <p>For Topsoil:</p> <p>Per hour excavator will consume = 10 litres / hour</p> <p>Per hour excavator will excavate = 8706m³ of Topsoil</p> <p>For 8706m³ = 8706/ 60 = 145 hours</p> <p>Diesel consumption working hours = 145 x 10 litres</p> <p>Total diesel consumption = 1450 litres of HSD will be utilized for Topsoil.</p>															



		<p>For Rough stone:</p> <p>Per hour excavator will consume = 16 liters / hour</p> <p>Per hour excavator will excavate = 20m³ of rough stone</p> <p>For 481920m³ = 481920 / 20 = 24096 hours</p> <p>Diesel consume 24096 working hours = 24096 hours x 16 liters</p> <p>Total diesel Total diesel consumption = 385536 liters of HSD will be utilized for Rough stone.</p> <p>Total diesel consumption is around (Topsoil 1450 Litres + Rough Stone 385536Litres) = 386986 litres of HSD for the entire period of life.</p>
6.6	a.	<p>Disposal of Overburden : The entire lease area is covered 1.0m of Topsoil and the estimated quantity of Topsoil is 8706m³. Topsoil formation will be removed and dumped at all side boundary barrier of the lease area. It will be utilized for afforestation and road low lying areas.</p>
6.7	a.	<p>Brief Note on Conceptual Mining Plan for the entire lease period : Conceptual Mining Plan is prepared with an object of systematic development of bench lay outs, selection of ultimate pit limit, depth of quarrying, ultimate pit slope, etc., Average Ultimate Pit dimension in given as Under,</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p style="text-align: center;">Ultimate Pit Dimensions:</p> <p style="text-align: center;">229.0m(L) X 144.0m(W) Avg X 45.0m(D)</p> </div> <p>Ultimate pit size is designed based on certain practical factors such as the economical depth of mining, safety zones, permissible areas etc. Afforestation has been proposed on the boundary barrier by planting trees.</p> <p>All the baseline information studies like Air Quality monitoring, Noise and Vibration monitoring, Water Analysis studies are being carried out every year as per the MOEF norms.</p>

7.0 BLASTING:

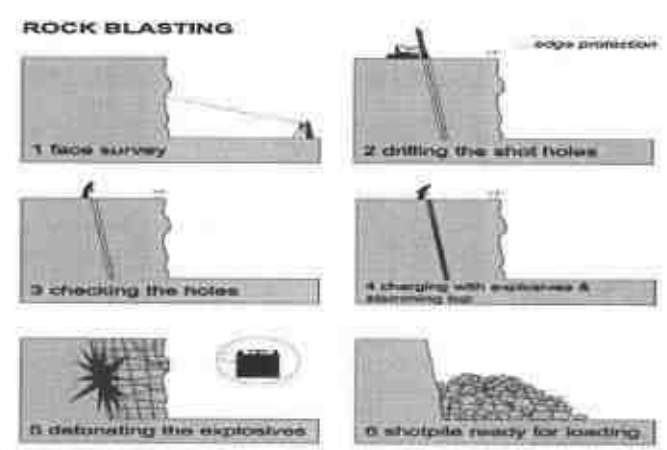


7.1 Proposed Control Blasting Pattern

The massive formation shall be broken into pieces of portable size by drilling and Proposed Control Blasting using jack hammers and shot hole Blasting. Powder factor of explosives for breaking such hard rock shall be in the order of 6 to 7 tonnes per K.g of explosives.

Proposed Control Blasting parameters are as follows.

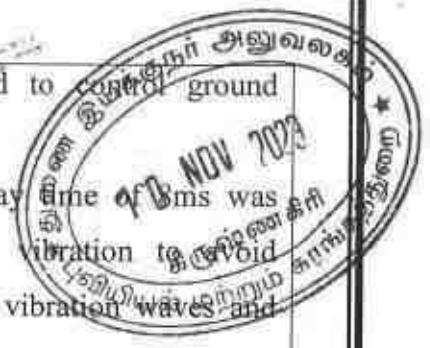
Diameter of the hole	:	32-36 mm
Spacing	:	60 Cms
Depth	:	1 to 1.5m
Charge / Hole	:	D.Cord with water or 70 gms of gun powder or Gelatine.
Pattern of hole	:	Zig Zag
Inclination of hole	:	70 ⁰ from the horizontal.
Quantity of rock broken	:	0.45 MT x 2.6 = 1.17 MT
Control Blasting efficiency @90%	:	1.17 x 90% = 1.05MT / hole
Charge per hole	:	140 gms of 25mm dia cartridge
Quantity of rock broken per day	:	321.3M ³ .



7.2 Types of Explosives

Following explosives are recommended for efficient blasting with safe practice.

S. No	Description	Class / Division	Type	Size
1.	Slurry	Class - 3	Nitro Compound	25 x 200
2.	Detonators	Class - 3	Ordinary and elec (OD & ED)	6.5 x 32
3.	Safety fuse	Class - 6	Blue sump fuse coils of 10mts each	

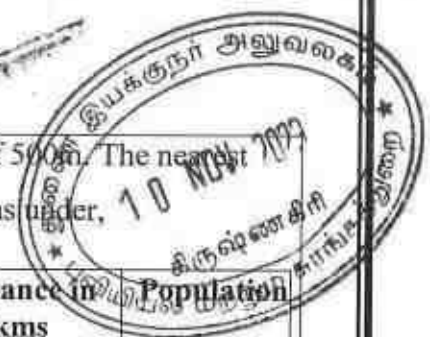


7.3	Measures proposed to minimize ground vibration due to blasting	:	<p>The following steps are being adopted to control ground vibration due to blasting.</p> <ol style="list-style-type: none"> 1. The minimum recommended delay time of 0.8 ms was introduced to minimize ground vibration to avoid constructive interference of blast vibration waves and hence its impact or amplitude is less. 2. Use of Ammonium nitrate fuel oil mixture for shot holes is avoided because which cause high fly of rocks in view critical diameter problem. Only high strength explosives like slurry are used in the form of cartridge. 3. Charge per hole will exceed the powder factor designed for each hole based on the quantum of blasting, strength of rocks, fracture pattern etc.
7.4	Storage of Explosives and safety measures to be taken while blasting.	:	<ol style="list-style-type: none"> 1. An authorized explosive agency is engaged to carry out blasting. 2. The blasting time in a day is between 5 PM to 6 PM. 3. First Aid Box is kept ready at all the time. 4. Necessary precautionary announcement is being carried out before the blasting operation.

8.0 MINE DRAINAGE:

8.1	Depth of Water table	:	<p>The ground water table is reported as 67m below ground level in nearby open wells and bore wells of this area. Mining reserves calculated taken as 45m. Now, proposed quarry depth is above the water table. Hence, quarrying may not affect the ground water.</p>
8.2	Arrangement and Places where the mine water is finally proposed to be discharged	:	<p>The ground water may not rise immediately in this type of mining. However, the rain water percolation and collection of water from the seepage shall be less than 300 lpm and it shall be pumped about periodically by a stand by diesel powered Centrifugal pump motivated with 7.5 H.P. Motor. The quality of water is potable and it is not contaminated with any hazardous things.</p>

9.0 OTHER PERMANENT STRUCTURES:



9.1	Habitations / Village	:	There are no villages within a radius of 500m. The nearest habitations with the population is given as under.			
			Direction	Village	Distance in kms	Population
			North	Kallukurikki	1.0 Kms	260
			East	Kathinayanapalli	3.4Kms	210
			South	Krishnagiri	4.0kms	550
West	Bayanapalli	2.7Kms	200			
9.2	Power lines (HT/LT)	:	There is no Power line is located in the lease area.			
9.3	Water bodies (River, Pond, Lake, Odai, Channel etc)	:	There is no other Water bodies like River, Pond, Lake, etc located in this area.			
9.4	Archeological / Historical Monuments	:	There are no Archeological / Historical Monuments within a radius of 500m.			
9.5	Road (NH, SH, Village Road etc)	:	Quarry site is located in Northern side at a distance of 4.0kms from Krishnagiri.			
9.6	Places of Worship	:	There are no Places of Worship within a radius of 500m.			
9.7	Reserved Forest / Forest / Social Forest / Wild Life Sanctuary etc.,	:	There are no Wild Life Sanctuary etc within a radius of 10km. No reserve forest located within 60m radial distance.			
9.8	Any Interstate Border, Protected areas under the Wild Life (Protection) Act, 1972, Critically Polluted Areas as Identified by Central Pollution Control Board and Notified Eco sensitive areas	:	There are No inter State border within a radius of 5 kms. North Cauvery Wild life Sanctuary located within the distance of about 26.6Kms from the lease area.			
9.9	Any Other Structures	:	Nil.			

10.0 EMPLOYMENT POTENTIAL & WELFARE MEASURES:



10.1	Employment Potential (Management & Supervisory personal)	:
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1. As per Mines safety under the provisions of MMR, 1961 under the Mines Act, 1952 whenever the workers are employed more than 10, it is preferred to have a qualified Mining Mate to keep all the production workers directly under his control and supervision.

2. The following man power is proposed for quarrying Rough Stone during the Five years period to achieve the proposed production and to comply the provisions of the Government norms.

1.	Skilled	Operator	3 No.
		Mechanic	1 No.
		Blaster/Mat	1 No.
2.	Semi – skilled	Driver	3 Nos
3.	Unskilled	Musdoor / Labors	5 Nos
		Cleaners	2Nos
		Office Boy	1No
4.	Management & Supervisory staff		2No.
	Total =		18Nos

10.2	Welfare Measures	:
	a. Drinking Water	:
	b. Sanitary facilities	:

Drinking water at the rate of 2Ltrs per person shall be provided as per the Mines Rules, 1960. It is proposed to make a borehole for providing uninterrupted supply of drinking water and other utilities.

Semi-permanent latrines & urinals shall be maintained at convenient places for use of labours as per the provisions of Rule (33) of the Mines Rules, 1960 separately for males and females. Washing facilities shall also be arranged as per rule (36) of the Mines Rules, 1960.



c.	First Aid Facility	:	Being a small mine First Aid station as per provisions under Rule (44) of the Mines Rules 1960 is provided with facilities as per the third schedule as prescribed. Qualified First Aid personnel should be appointed or nominated to attend emergency first aid treatment.
d.	Labor Health	:	As per Mines Rule, Periodic medical examination has been arranged for occupational health once in a year in addition to attending medical treatment of occupational injuries under the Rule 45 (A), MR, 1960.
e.	Precautionary safety measures to the Laborers	:	<p>Safety provisions like helmet, goggles, safety shoes, Dust mask, Ear muffs etc have to be provided as per the circulars and amendments made for Mine labours under the guidance of DGMS being a mechanized operation.</p> <p>Necessary training will be conducted once in a year to all the employees with the help of qualified and experienced officers to train about the safe and system at quarrying operation.</p>

PART – B

11.0 ENVIRONMENTAL MANAGEMENT PLAN:

11.1	Area Land Use Pattern	:	The applied land use pattern is given as under.			
			SL. NO	Description	Present Area (HECT)	Area In Use During The Quarrying Period (HECT)
			1.	Area under quarrying	3.00.00	3.32.00
			2.	Infrastructure	Nil	0.01.00
			3.	Roads	0.01.00	0.01.00
			4.	Green Belt & Dump	Nil	1.40.90
			5.	Unutilized Area	1.73.90	Nil
			Total =		4.74.90Ha	4.74.90Ha

11.2	Water Regime	: Water table in this area is noticed at a depth of 67m below the surface ground level and presently, the quarrying of Rough Stone is proposed up to a depth of 45m and hence, it will not affect the ground water depletion of this area.																				
11.3	Flora and Fauna	: Except acacia bushes, no other valuable trees are noticed in the Applied Lease area. Further, neither flora of botanical interest nor fauna of zoological interest is noticed in this area.																				
11.4	Climatic conditions	: Generally sub-tropical climatic condition prevails throughout the year and this District receives rain both in South west and North east monsoon. The average rainfall is about 800mm to 900mm and the temperature ranges from 18°C during winter and to a maximum of 38°C during the summer.																				
11.5	Human Settlement	: The nearest habitations with the population. <table border="1"> <thead> <tr> <th>Direction</th> <th>Village</th> <th>Distance in Kms</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>North</td> <td>Kallukurikki</td> <td>1.0 Kms</td> <td>260</td> </tr> <tr> <td>East</td> <td>Kathinayanapalli</td> <td>3.4Kms</td> <td>210</td> </tr> <tr> <td>South</td> <td>Krishnagiri</td> <td>4.0kms</td> <td>550</td> </tr> <tr> <td>West</td> <td>Bayanapalli</td> <td>2.7Kms</td> <td>200</td> </tr> </tbody> </table>	Direction	Village	Distance in Kms	Population	North	Kallukurikki	1.0 Kms	260	East	Kathinayanapalli	3.4Kms	210	South	Krishnagiri	4.0kms	550	West	Bayanapalli	2.7Kms	200
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11.6	Plan for Air, Dust Suppression	: Air or dust expected to be generated from drilling process, hauling roads, places of excavation etc., is being suppressed by periodical wetting of land by water spraying. For the sampling of air, high volume air sampler (Model VFC-PM10) was used (10 meter above and 5 meter away from road) and the particulates were collected on what man GFA glass fiber filters dried in a hot air oven at 105°C for 1hr and weighed. The average flow rate was about 1.1 cubic meters.																				
11.7	Plan for Noise Control	: Quarrying of Rough Stone is being carried out by drilling and blasting by using low power explosives, and hence, noise is very minimum. However, periodical noise level monitoring will be carried out to check the noise level in and around the quarry site.																				

		In order to assess the extent of noise pollution due to vehicular traffic different zones viz. Silence zone, Residential Zone, Commercial zone, Traffic signals and Industrial zones were identified in urban and suburban areas of Krishnagiri. Adequate number of observations were made in all the selected sites by using the sound level meter (LT Lutron SL-4001).
11.8	Environmental Impact Assessment Statement Describing Impact on mining on the next Five Years.	Factors to be considered for EIA are, <ol style="list-style-type: none"> 1. Dust generation, 2. Land degradation 3. Stabilization and vegetation of dumps 4. Adverse effect on water regime 5. Socio economic benefits arising out of Mining. 6. Noise and Vibration.
	a. Dust	Dust is expected to be generated from drilling, hauling roads; place of excavation etc and it will be suppressed by periodical wetting of lands.
	b. Land degradation	Land degradation is by means of cutting the trees and removal of fertile soil does not arise. Proposed usage of land for the next Five years shall be less than 4.74.90Ha Afforestation will be started during the first year of mining operation itself.
	c. Stabilization and vegetation of dumps	The soil will be spread over the non-active dumps along the slope and edges to plant tree saplings to form vegetal cover over the dumps. Such vegetal cover will prevent erosion of dumps during rainy seasons.
	d. Socio economic benefits arising out of mining	<ol style="list-style-type: none"> 1. To provide Employment opportunities of the nearby villagers. 2. For the cultural development of the nearby villagers.
	e. Noise and vibration	Since, no deep hole blasting is proposed with small dia explosives are used for breaking the hard rock and boulders, the noise and vibration is very minimum and are within the permissible limits.

11.9	Proposal for Waste Management	:	There is no requirement for waste management as there is 100% recovery percentage.
11.10	Proposal of Reclamation of Land affected during mining activities and at the end of mining.	:	The present mining is proposed to a depth of 45m. The mined out area will be fenced on top of open cast working with S1 fencing. Low lying areas with water logging shall be used for fish culture. No immediate proposals for closure of pit as the rough stone persist still at deeper level.
11.11	Program for Afforestation	:	Trees like Neem & Pungan etc were planted along the lease boundary and avenues as well as over non active dumps at a rate 100 trees per year with an interval of 5m. The rate of survival expected to be 80% in this area.

11.12	Proposed Financial Estimate / Budget for (EMP) Environment Management	:	
	<u>Fixed Asset Cost:</u>		
	1. Land Cost	:	Rs.46,92,000/- (Amount for Patta Land)
	2. Labour Shed	:	Rs. 1,60,000/-
	3. Sanitary Facility	:	Rs. 90,000/-
	4. Fencing cost	:	Rs. 70,000/-
	Total=	:	Rs.50,12,000/-
	<u>Operational Cost:</u>		
	<u>Machinery cost</u>	:	Rs.30,00,000/-
	<u>EMP Cost:</u>		
	1. Drinking water facility	:	Rs. 1,20,000/-
	2. Safety kits	:	Rs. 60,000/-
	3. Water sprinkling	:	Rs. 80,000/-
	4. Afforestation	:	Rs. 30,000/-
	5. Water quality test	:	Rs. 30,000/-
	6. Air quality test	:	Rs. 30,000/-
	7. Noise/vibration test	:	Rs. 30,000/-
	Total=	:	Rs. 3,80,000/-
	Total Project Cost	:	Rs.83,92,000/-

12.0 MINE CLOSURE PLAN:

12.1	Steps proposed for phased restoration, reclamation of already mined out area.	:	The present mining is proposed to a depth of 45m . The mined out area will be fenced on top of open cast working with SI fencing to arrest the entry of cattle's and public in to the quarry site.
12.2	Measures to be under taken on mine closure as per Act & Rules	:	Measures will be taken as per the Acts and Rules. The quarried pit will be fenced by using Barbed wire fencing. Green belt development at the rate of 100 trees per year will be proposed.
12.3	Mitigation measures to be undertaken for safety and restoration/ reclamation of the already mined out area	:	The pits were already opened by earlier Quarrying. Hence, the quarrying operation will be continued in the existing pit after making proper benches within the lease Area.

13.0 ANY OTHER DETAILS INTEND TO FURNISH BY THE APPLICANT

- (i) Permission will be obtained from the Director of Mines Safety for extracting the Rough Stone from the Boundary barriers and from slopes.
- (ii) Care and precautionary measures will be taken for the safety of workers as per Rules and Acts.
- (iii) The applicant will endeavor every attempt to quarry the Rough Stone economically without any wastage and to improve the environment and ecology.
- (iv) Accordingly, Mining Plan is prepared under Rule 41 & 42 as amended in Tamil Nadu Minor Mineral Concession Rules, 1959 by incorporating the conditions imposed in the precise area communication letter and by incorporating all the details proposed in the letter to obtain environment clearance from State Environment Impact Assessment Authority.
- (v) In the above circumstances, this Mining Plan is prepared for approval of Rough Stone Quarry for a period of **Five Years**.



This Mining Plan is approved based on guidelines / instruction issued and in corporation of the particulars specified in the letter Roc. No. 13/11/2014 Dated 10.11.2014 of the Deputy Director of Geology and Mining, Krishnagiri and subject to further fulfillment of the conditions laid down under Tamil Nadu Minor Mineral Concession Rules, 1959 and Minor Mineral Conservation and Development Rule 2010.

S. Dhana
S. DHANASEKAR, M.Sc. (Geo)
Qualified Person

[Signature]
DEPUTY DIRECTOR
Geology and Mining;
Collectorate, Krishnagiri.

[Signature]
10/11/2014

This Mining Plan is approved subject to the conditions / Stipulation indicated in the Mining Plan Approval
Letter Roc. No. 13/11/2014 Dated 10.11.2014

ந.க.எண். 1314/2023/கனிமம் நாள்: .10.2023.



குறிப்பாணை

பொருள் : கனிமங்களும் சுரங்கங்களும் - சிறு கனிமம் - சாதாரண கற்கள் - கிருஷ்ணகிரி மாவட்டம் மற்றும் வட்டம் - கொத்தபெட்டா கிராம பட்டா புல எண்கள்: 87/1பி1 மற்றும் 87/1பி2-ல் 4.74.90 ஹெக்டேர் பரப்பில் சாதாரண கற்குவாரி செய்ய தி/ள். ஏ.எம் குவாலிட்டி ஸ்டோன் என்ற நிறுவனத்தினர் விண்ணப்பம் அளித்தது - வருவாய்துறை, புலியியல் மற்றும் சுரங்கத்துறை மற்றும் வனத்துறை புலத்தணிக்கை அறிக்கை சமர்ப்பிக்கப்பட்டது - தகுதியான நிலப்பரப்பாக கருதி ஏற்பளிக்கப்பட்ட சுரங்க திட்டம் மற்றும் சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணைய தடையின்மை சான்று பெற்று சமர்ப்பிக்கக் கோருதல் - தொடர்பாக.

- பார்வை :
1. அரசாணை எண்.208 தொழில் துறை நாள் 21.09.2020-ல்
 2. தி/ள்.ஏ.எம். குவாலிட்டி ஸ்டோன், புல எண் 87/1பி1 மற்றும் 87/1பி2, அக்கலாபுரம், கொத்தபெட்டா கிராமம், கிருஷ்ணகிரி வட்டம் மற்றும் மாவட்டம்-635001 என்ற நிறுவனத்தின் விண்ணப்பம் நாள்: இல்லை (இவ்வலுவலகத்தில் பெறப்பட்ட நாள்:06.06.2023)
 3. துணை இயக்குநர் புலியியல் மற்றும் சுரங்கத்துறை, கிருஷ்ணகிரி ந.க.1314/2023/கனிமம், நாள்: 13.06.2023 மற்றும் 15.06.2023.
 4. வட்டாட்சியர், கிருஷ்ணகிரி கடிதம் ந.க.3648/2023/அ3 நாள்: 13.07.2023.
 5. வருவாய் கோட்டாட்சியர், கிருஷ்ணகிரி கடிதம் ந.க.எண்.5188/2023/சி நாள்: 20.07.2023.
 6. வன உயிரினக்காப்பாளர், ஓசூர் கடித ந.க.எண்.6846/2023/எல் நாள்: 10.07.2023.
 7. உதவி புலியியலாளர் (கனிமம்) புலத்தணிக்கை அறிக்கை நாள்: 20.09.2023.
 8. அரசு ஆணை (3D) எண்.243 தொழில், முதலீட்டு ஊக்குவிப்பு மற்றும் வர்த்தகம் (எம்எம்இ-2) துறை நாள்: 14.12.2022.

9. மற்றும் உரிய ஆவணங்கள்

பார்வைகளின் மீது கனிவான கவனம் வேண்டப்படுகிறது.

2. கிருஷ்ணகிரி மாவட்டம் மற்றும் வட்டம், கொத்தபெட்டா கிராமம், பட்டா புல எண்கள்: 87/1பி1பி மற்றும் 87/1பி2பி (பகுதி)-ல் 4.74.90 ஹெக்டேர் பரப்பில் சாதாரண வகை கற்குவாரி செய்ய உரிமம் வழங்க கோரி தி/ள்.ஏ எம் குவாலிட்டி ஸ்டோன் என்ற நிறுவனத்தினர் விண்ணப்பத்தினை உரிய ஆவணங்களுடன் சமர்ப்பித்துள்ளனர்.

3. மேற்கண்ட விண்ணப்பம் தொடர்பாக வட்டாட்சியர், கிருஷ்ணகிரி, வருவாய் கோட்டாட்சியர், கிருஷ்ணகிரி, வன உயிரினக்காப்பாளர், ஓசூர், உதவி புவியியலாளர் (கனிமம்) மற்றும் சார் ஆய்வாளர் நில அளவர் (கனிமம்) கிருஷ்ணகிரி ஆகியோர் பலத்தணிக்கை மேற்கொண்டு கிருஷ்ணகிரி வட்டம், கொத்தபெட்டா கிராமம், பட்டா புல எண்கள்: 87/1பி1பி மற்றும் 87/1பி2பி-ல் 4.74.90 ஹெக்டேர் பரப்பளவில் விண்ணப்பதாரர் தி/ள்.ஏ எம் குவாலிட்டி ஸ்டோன் என்ற நிறுவனத்திற்கு மேற்கண்ட நிபந்தனைகளுக்குட்பட்டு அனுமதி வழங்கலாம் என பரிந்துரை செய்துள்ளனர்.

நிபந்தனைகள்:

- a. 1959ம் வருடத்திய தமிழ்நாடு சிறு கனிம சலுகை விதிகள், அட்டவணை IIல் கண்டுள்ளபடி குவாரி செய்யப்படும் கனிமங்களுக்குரிய சீனியரேஜ் தொகை அவ்வப்போது செலுத்தி கனிமம் கொண்டு செல்லப்பட வேண்டும். அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீ பாதுகாப்பு இடைவெளி விட்டு குவாரிப்பணி மேற்கொள்ள வேண்டும்.
- c. அனுபவம் வாய்ந்த வெடிபொருள் பயன்படுத்துவோர் மூலம் குறைந்த அளவு சக்தி கொண்ட வெடிபொருட்களை பயன்படுத்தி அருகிலுள்ள பட்டாதாரர்களுக்கு எவ்வித இடையூறுமின்றி / அருகிலுள்ள பட்டா மற்றும் அரசு புலங்களில் எவ்வித ஆக்கிரமிப்பும் இன்றி குவாரிப்பணி மேற்கொள்ள வேண்டும்.
- d. விதிகளின்படி ஏற்பளிக்கப்பட்ட சுரங்கத்திட்டத்தினை உரிய காலத்திற்குள் சமர்ப்பிக்க வேண்டும்.



e. குவாரி உரிமம் வழங்க உள்ள பகுதிக்கு சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் தடையின்மை சான்று பெற்று சமர்ப்பிக்கும் பட்சத்தில் மட்டுமே குவாரி உரிமம் வழங்கப்படும்..

4. எனவே, வட்டாட்சியர், கிருஷ்ணகிரி, வருவாய் கோட்டாட்சியர், கிருஷ்ணகிரி, வன உயிரினக்காப்பாளர், ஓதர், உதவி புவியியலாளர் (கனிமம்), மற்றும் சார் ஆய்வாளர் நில அளவர் (கனிமம்) கிருஷ்ணகிரி ஆகியோரின் பரிந்துரை மற்றும் நிபந்தனைகளின் அடிப்படையில், கிருஷ்ணகிரி மாவட்டம் மற்றும் வட்டம், கொத்தபேட்டா கிராம பட்டா 87/1பி1பி மற்றும் 87/1பி2பி-ல் 4.74.90 ஹெக்டேர் பரப்பளவில் மட்டும் 1959-ம் வருட தமிழ்நாடு சிறுகனிம விதிகள், விதி எண்.19(1)-ன்படி மேற்கண்ட நிபந்தனைகளுக்குட்பட்டு ஏற்கனவே உரிமம் வழங்கப்பட்ட பகுதி என்பதால் 05 (ஐந்து) வருட காலத்திற்கு மட்டுமே சாதாரண கற்குவாரி உரிமம் வழங்குவதற்குரிய தகுதியான நிலப்பரப்பாக கருதப்படுகிறது.

5. மேலும், தமிழ்நாடு சிறு கனிம சலுகை விதிகள்-1959 விதி எண். 41-ன்படி குவாரிப்பணி மேற்கொள்வது தொடர்பாக வரைவு சுரங்க திட்டத்தினை 90 தினங்களுக்குள் சமர்ப்பிக்குமாறு மனுதாரரைக் கேட்டுக்கொள்ளப்படுகிறது. மேலும் ஏற்பளிக்கப்பட்ட சுரங்கத்திட்டத்தின் தொடர்ச்சியாக 1959ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், விதி எண்.42-ன்படி சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் தடையின்மை சான்று பெற்று சமர்ப்பிக்கும் பட்சத்தில் மட்டுமே குவாரி உரிமம் வழங்கப்படும் என இதன் மூலம் தெரிவிக்கப்படுகிறது.

துணை இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
கிருஷ்ணகிரி.

பெறுநர்:

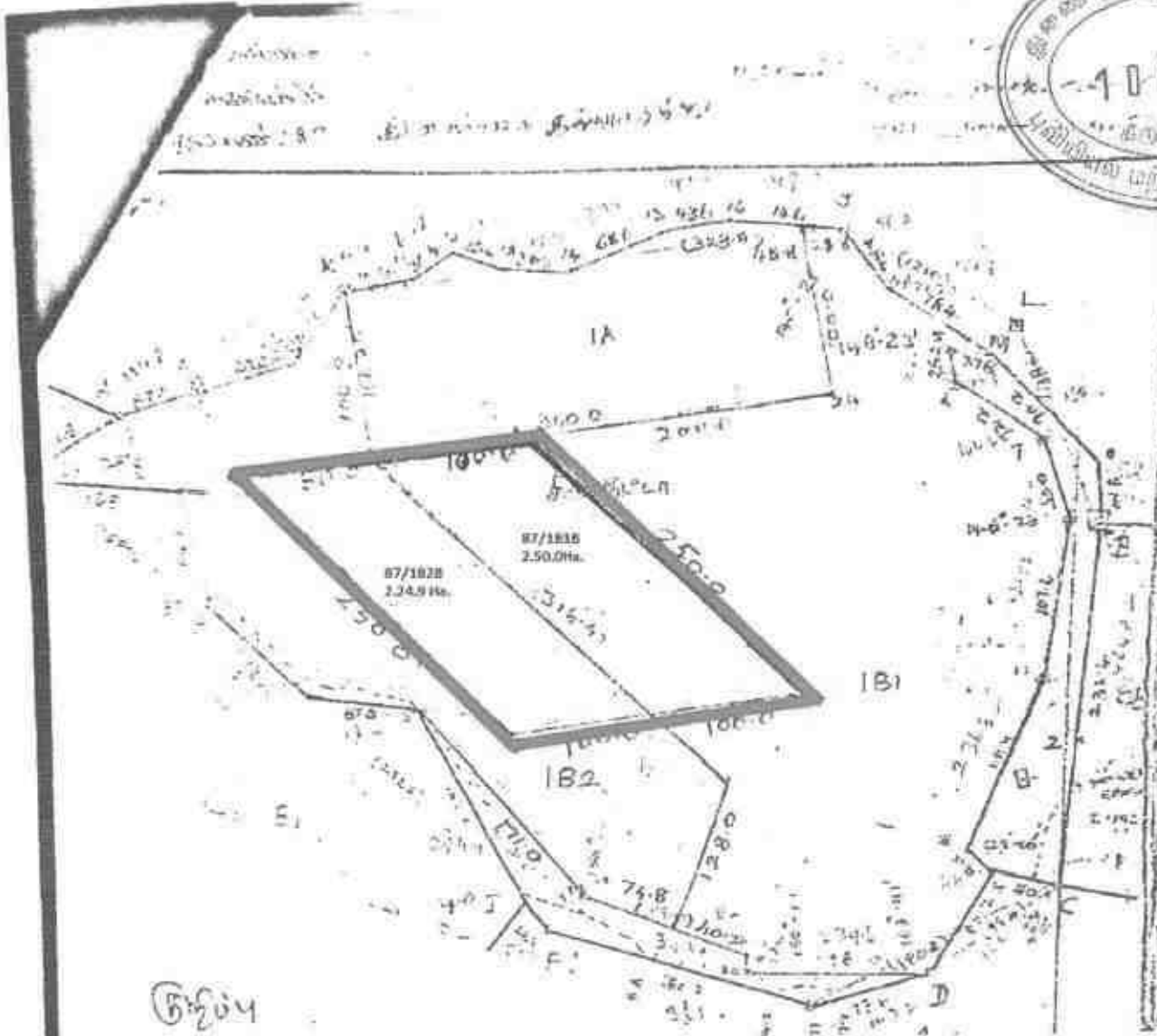
தி/ள்.ஏ.எம். குவாலிட்டி ஸ்டோன்,
புல எண் 87/1பி1 மற்றும் 87/1பி2,
அக்கலாபுரம், கொத்தபேட்டா கிராமம்,
கிருஷ்ணகிரி வட்டம் மற்றும் மாவட்டம்-635001

நகல்:

1. ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, சென்னை.
2. மாவட்ட ஆட்சித் தலைவர், கிருஷ்ணகிரி - தகவலுக்காக.

S. DHANASEKAR, M.Sc. (Geo)
Qualified Person

ANNEXURE 11
 10 NOV 2023



ಶಿಕ್ಷಣ

ಶಿಕ್ಷಣ ಕಾಲೇಜು ಮತ್ತು
 ಉಚ್ಚಶಿಕ್ಷಣ ಕಾಲೇಜು ಮತ್ತು
 ಕೆ.ಆರ್. ಸಾಹೇಬ್ ಮತ್ತು



COLLECTOR
 KRISHNAGIRI

21/21

Lease Applied Area:

[Signature] 21/11/2014
 Sub-Inspector of Surveyor
 DEPUTY DIRECTOR OFFICE
 Geology and Mining Dept.
 KRISHNAGIRI

DOCUMENT
 No: 156/2016
 Page No: 32
 Total Pages No: 225
 JSR-1

ಶಿಕ್ಷಣ ಕಾಲೇಜು
 ಕ್ರಾಸಿಂಗ್
 ರೆಜಿಸ್ಟರ್ಡ್
 ಹೋಡರ್ಸ್:-

[Signature]
 ಶಿಕ್ಷಣ ಕಾಲೇಜು
 ಕ್ರಾಸಿಂಗ್
 ರೆಜಿಸ್ಟರ್ಡ್
 ಹೋಡರ್ಸ್:-

[Signature]
 S. DHANASEKAR, M.Sc., (Geo)
 Qualified Person

[Signature]
 ಶಿಕ್ಷಣ ಕಾಲೇಜು
 ಕ್ರಾಸಿಂಗ್
 ರೆಜಿಸ್ಟರ್ಡ್
 ಹೋಡರ್ಸ್:-

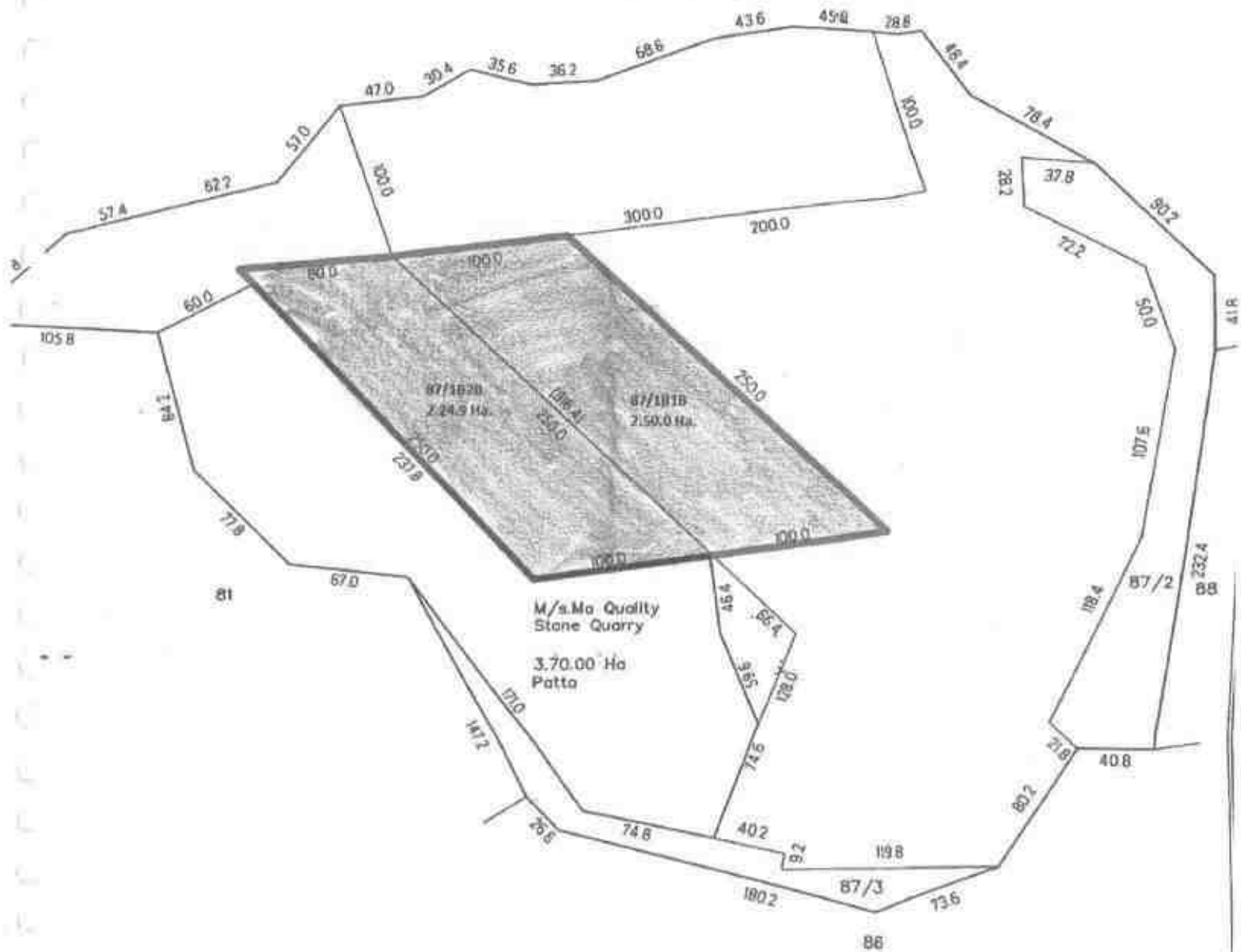
DISTRICT : KRISHNAGIRI
TALUK : KRISHNAGIRI

Survey No: 87

VILLAGE No.124
NAME : KOTHAPETTA
AREA : 21 ARE 57.0



Kallukurukki Village



S. Dhanasekar
S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

Scale 1:2500

558 A

Lease Applied Area:	
S.F.No. 87/181B	= 2.50.0 Ha.
S.F.No. 87/182B	= 2.24.9 Ha.
Total	= 4.74.9 Ha.



தமிழ்நாடு அரசு

வருவாய்த் துறை

நில உரிமை விபரங்கள் : இ. எண் 10(1) பிரிவு

மாவட்டம் : கிருஷ்ணகிரி

வட்டம் : கிருஷ்ணகிரி

வருவாய் கிராமம் : கொத்தபேட்டா

பட்டா எண் : 1870

உரிமையாளர்கள் பெயர்

1. ப.மதிமுசு

மனைவி

K.M.விஜயா

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	
87	181B	2 - 50.00	3.45	--	--	--	--	2023/0105 /31/506458--2023 /31/05/000241SD -- 12-10-2023
87	182B	2 - 24.90	3.10	--	--	--	--	2023/0105 /31/506458--2023 /31/05/000241SD -- 12-10-2023
		4 - 74.90	6.55					

குறிப்பு 2 :



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் யின் பதிவேட்டிலிருந்து பெறப்பட்டவை. துறை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 31/05/072/01870/20256 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
- இத் தகவல்கள் 30-11-2023 அன்று 10:41:02 AM நேரத்தில் அச்சடிக்கப்பட்டது.
- கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்



மாவட்டம் : கிருஷ்ணகிரி

வட்டம் : கிருஷ்ணகிரி

கிராமம் : கொத்தபேட்டா

1. புல எண்	87	9. மண் வயனமும் ரகமும்	8 - 4
2. உட்பிரிவு எண்	1B1B	10. மண் தரம்	6
3. பழைய புல உட்பிரிவு எண்	87-1B1	11. தீர்வை (ரூ - ஹெ)	1.38
4. பகுதி	P	12. பரப்பு (ஹெக்டேர் - ஏர்)	2 - 50.00
5. அரசு / ரயத்துவாரி	ரயத்துவாரி	13. மொத்த தீர்வை (ரூ - ஸப)	3.45
6. நிலத்தின் வகை	புஞ்சை	14. பட்டா எண்	1870
7. பாசன ஆதாரம்	-	15. குறிப்பு	-
8. இரு போகமா	-	16. பெயர்	1.K.M.விஜயா

குறிப்பு 1:



1.

மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 90256 என்ற குறிப்பு எண்ணை உள்ளிடு செய்து உறுதி செய்துகொள்ளவும்.



மாவட்டம் : கிருஷ்ணகிரி

வட்டம் : கிருஷ்ணகிரி

கிராமம் : கொத்தபேட்டா

1. புல எண்	87	9. மண் வயனமும் ரகமும்	8 - 4
2. உட்பிரிவு எண்	1B2B	10. மண் தரம்	6
3. பழைய புல உட்பிரிவு எண்	87-1B2	11. தீர்வை (ரூ - ஹெ)	1.38
4. பகுதி	P	12. பரப்பு (ஹெக்டேர் - ஏர்)	2 - 24.90
5. அரசு / ரயத்துவாரி	ரயத்துவாரி	13. மொத்த தீர்வை (ரூ - பை)	3.10
6. நிலத்தின் வகை	புஞ்சை	14. பட்டா எண்	1870
7. பாசன ஆதாரம்	-	15. குறிப்பு	-
8. இரு போகமா	-	16. பெயர்	1.K.M.விஜயா

குறிப்பு 1:



1.

மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 90256 என்ற குறிப்பு எண்ணை உள்ளிடு செய்து உறுதி செய்துகொள்ளவும்.


S. DHANASEKAR, M.Sc., (Geo)
Qualified Person



தமிழ்நாடு தமில்நாடு TAMILNADU

CU 090522



05/05/23

A M QUALITY STONE.

KRISHNAGIRI

B.R. Sathish Kumar
B. R. SATHISH KUMAR
S. V. Lc: 6579/88
Krishnagiri, Tamilnadu.

LEASE AGREEMENT

INDENTURE OF LEASE MADE ON THIS 05th day of May 2023 at KRISHNAGIRI Between.

Mrs.K.M.VIJAYA W/o.D.MATHIAZHAGAN, residing at Door No.58B, Gandhi Nagar, Basheer Mohammed Layout, Gandhi Nagar, Krishnagiri Town, Krishnagiri Taluk, Krishnagiri District. (Herein after called and understood as the "LESSOR" or the FIRST PARTY).

A M QUALITY STONE office at SF.No.87/1B1 & 87/1B2, Akkalapuram, Kothapetta Village, Krishnagiri, Krishnagiri Town, Krishnagiri Taluk & District, represented by its Managing Partner Sri.M.Kowshik Dhev, S/o.D.Mathiazhagan, residing at Door No.58B, Gandhi Nagar, Basheer Mohammed Layout, Gandhi Nagar, Krishnagiri Town, (Herein after called the "LESSEE" or SECOND PARTY).

[Signature]
LESSEE



[Signature]
LESSOR

Before me,
[Signature]
05/05/2023
M. BASKARAN, B.A., LL.B.
NOTARY PUBLIC
38/16, MEL ANJANEYAR KOIL ST
KRISHNAGIRI-635 001

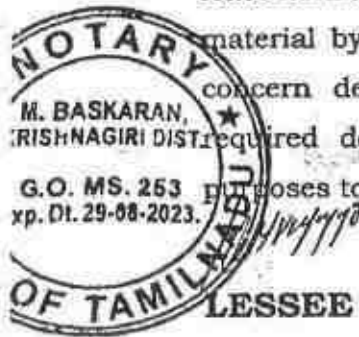


WHEREAS the Lesser is the absolute owner of the property described in the schedule hereunder by way of Registered Sale Deed Vide Document No.521/2023 of Book 1 registered in the office of the Joint-I Sub-Registrar, Krishnagiri and thus the Lesser her legally and lawfully in continuous possession and enjoyment of the schedule mentioned property at **AKKALAPURAM KOTTHAPETTA VILLAGE**, The 1st party has agreed to let out the said property to the 2nd party on Monthly Rent of **Rs.5,000/- (Rupees Five Thousand only)**. This Indenture of lease have been entered into for a period of **29 (Twenty Nine) years (05.05.2023 to 04.05.2052)** by common consent and approval on the following terms.

Now this lease deed witnesseth as follows:

In pursuance of the above said oral understanding between the parties and in consideration of the Monthly rent of **Rs.5,000/- (Rupees Five Thousand Only)** payable by the lessee and the mutual covenants hereinafter contained, the lesser do hereby lease and rent the schedule mentioned property (hereinafter referred to as "**SCHEDULE PROPERTY**") to the lessee to use and enjoy the same on tenancy for a period of **29 years** with effect from above said the date and lessee shall pay the lease amount of **Rs.5,000/- (Rupees Five Thousand Only)** per minthr stipulated herein to the lesser on or before 10th day of every month regularly it is mutually agreed, The lessee is paying caution deposit amount of **Rs.60,000/- (Rupees Sixty thousand Only)** and this caution deposit amount is refundable to the lessee at the time of lessee vacating the schedule mentioned property and it carries no interest.

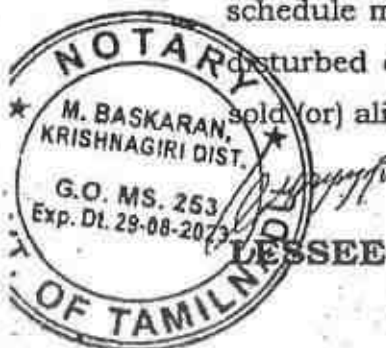
1. The lessee shall use and hold the schedule property for the purpose of running its industry by installing crusher and allied activities and trading activities.
2. The lesser has no objection in the lessee getting DIG and Quarrying in the lease land and process Blue Metal, other products and other allied material by using Equipments and Machineries under approvals from the concern department. Also the lessee is permitted to sign and submit required document relating to the lease land for quarrying and other purposes to concerned authorities.



Before me,
M. Baskaran
05/05/2023
M. BASKARAN, B.A., LL.B.
NOTARY PUBLIC
38/1E, MEL ANJANEYAR KOIL ST
KRISHNAGIRI-635 001

H. Koushik Shan
LESSOR

3. The lessor has no objection for lessee (or) its representatives interest to obtain license and Permissions from the concerned government departments and local bodies like GST Registration / IEC Registration / Capital registration / Pollution registration / Income Tax / Customs and Excise department etc., for running the crusher unit. and the lesser will extend all co-operation to the lease in this regard.
4. The lesser also give unconditional consent and approval for the lessee to put up buildings or superstructures on the schedule property for the purpose of its business activities and the lessee shall also obtain necessary conversion of land for industrial use and planning permission and other statutory clearance from the concerned authorities for making use of schedule property for its industrial activities. The said installation in the land has to be cleaned as per the instructions of the land owner.
5. The lessee shall not use the schedule property for any illegal or objectionable or dangerous purposes violating any law in order either directly or indirectly in any manner.
6. The lessee is allowed to sub -let or sub lease the schedule property either directly or indirectly to any person or persons in any manner. The lesser has no objection for the lessee carrying on its industrial (or) trading activities in the schedule property in the name of its sister concern (or) under different name and style either as a company (or) proprietary concern (or) partnership firm with the prior approval of the lesser.
7. The lesser shall permit the lessee to enjoy the schedule land quietly and peacefully without any interruption or disturbance by the lesser or any person claiming through him.
8. The lessors can not to create any encumbrance on the schedule property during the subsistence of the lease to assist the lessee to hold and enjoy the leased property without any disturbance and even in the event of the lesser is entrained to create any encumbrance involving transfer of interest in the schedule mentioned property, the lease hold rights of the lessee will not be disturbed during the subsistence of the lease and the property cannot be sold (or) alienated subject to the leasehold rights of the lessee.



Before me,
M. Baskaran
astotruy
M. BASKARAN, B.A., LL.B.
NOTARY PUBLIC
38/15, MEL ANJANEYAR KOIL ST
KRISHNAGIRI-635 001

M. Koushik Shari
LESSOR



- 9. The lesser undertakes to apply for electricity connection for the superstructures.
- 10. The lessee alone is liable for all statutory payment connected to its business and also other penalties, charges, cess etc., arising on account of any statutory requirement, violation, rules and regulations whatsoever and the schedule property cannot be attached or sold for any such liability, damages or arrears.
- 11. That in the event of the lessee committing any breach of the terms of lease deed, it shall be lawful for the lesser to take appropriate legal action, subject to rights of the bank or institution having right over the leasehold right mortgaged to such bank or institution by the lessees.
- 12. The lesser agrees that the lease will be continued for the fixed period of 29 years and after the expiry of lease period, it shall be lawful for the parties for entering into fresh lease deed subject to terms and conditions to be agreed upon. But if the lessee is found to be violation (or) committing any acts of breach of the terms and conditions of the lease deed prejudicial to his interest, the lesser is entitled to terminate the lease by giving six months notice by R.P.A.D and similarly if the lessee is desirous of terminating the lease it shall be done by giving six months notice in writing. The lesser is not entitled to claim the lease amount or any loss or damage of loss for the remaining unexpired period of lease.
- 13. That the buildings, other superstructures and fixtures put up by the lessee shall be removed by the lessee after the expiry of lease period (or) when the lease is terminated as the case may be at its cost or the lesser shall have the option to pay the value of such superstructures and retain the improvements to the schedule properties on as is where is basis at the time of the lessee surrendering the lease to the lesser.

[Signature]
LESSEE



[Signature]
LESSOR

Before me
[Signature]
M. BASKARAN, B.A., LL.B.
NOTARY PUBLIC
38/16, MEL ANJANEYAR KOIL ST
KRISHNAGIRI-635 001



14. The lessee is also permitted to lay underground pipes from other water sources to bring water to the schedule property for the purpose of industrial business and the lessee is also permitted to put up water tanks and other pipe connections for this purpose in the schedule land

15. The lessee is also permitted to erect polls, pillars and other supporting materials to install transformer, meters and other implements for the purpose of its industry

16. The parties mutually agree that the terms and conditions of this lease deed shall be binding on both the parties and also their legal heirs and successors in interest the terms and conditions of this lease deed shall be binding on the newly inducted parties also.

17. That the contents of this lease deed are read over and explained to the lesser in English and after admitting the correctness of the same the lesser is executing this deed of lease.

LESSEE

LESSOR



Before me,
M. Baskaran
05/05/2023
M. BASKARAN, B.A., LL.B.
NOTARY PUBLIC
38/16, MEL ANJANEYAR KOIL ST
KRISHNAGIRI-635 001

SCHEDULE OF PROPERTY



Krishnagiri District, Krishnagiri Registration District, Krishnagiri Joint Lands
Registration District, Krishnagiri Taluk, **AKKALAPURAM KOTHAPETTA**
Village [Patta No.]

Sy.No.87/1B1 Dry.H.A.6.17 1/2 Cent Asst.Rs.43.26 full land .

Sy.No. 87/1B2 Dry.H.A.5.55 1/2 Cent Asst.Rs.38.48 full land

Altogether making a total extent of Ac.11.73 (Eleven Acres and seventy three Cents) lands with including 37 Mango trees full right recovered under this deed of lease agreement.

IN WITNESS WHEREOF THE LESSOR AND LESSEE HAVE SIGNED THIS DEED OF LEASE ON THE DAY MONTH AND YEAR FIRST ABOVE WRITTEN.

LESSEE

LESSOR

Witness:

01. (R. ARUNKANNI)
No. 511/98 C Vengan Nagar
Ettimilli - KAVERIPATTINAM

02. C.V. VENKATASWAMY
s/o M. VEDIAPPA Gounder
15/20 Krishnasamy Street
Bangalore Road
KRISHNAGIRI

Signed in this before me
at Krishnagiri on 05.05.2023



05/05/2023
M. BASKARAN, B.A., LL.B.
NOTARY PUBLIC
38/16, MEL ANJANEYAR KOIL ST
KRISHNAGIRI-635 001

S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

ANNEXURE V
இயக்குநர் அலுவலகம்
10 NOV 2023
கிருஷ்ணாபுரம்



FORM C

[See rule 9(a)]

Acknowledgement of Registration of Firms

The Registrar of Firms, TamilNadu, hereby acknowledges the receipt of the statement proscribed by Section 58(1) of the Indian Partnership Act, 1932. The statement has been filed and the name of the firm A M QUALITY STONE has been entered in the Register of Firms as No FR/Krishnagiri/84/2023.



Date : 10-May-2023

Station : Krishnagiri

Digitally Signed by Thiru/ Tm/ Selvi

SIVALINGAM P

Registrar of Firms



செய்தியில் நிரூபணப்படுத்தியவர்
10/5/2023

S. DHANASEKAR, M.Sc., (Geo)
Qualified Person



தமிழ்நாடு தமில்நாடு TAMILNADU

CU 090519

A M QUALITY STONE.

கிருஷ்ணகிரி

B.R. SATHISH KUMAR
S. V. Lc: 6579/88
Krishnagiri, Tamilnadu.

"PARTNERSHIP DEED OF "A M QUALITY STONE"

This deed of partnership is executed at Krishnagiri on this 05th day of May 2023 between;

1. Sri.M.Kowshik Dhev, S/o.Sri.D.Mathiazhagan, aged about 29 years, residing at No.58-B, Gandhi Nagar,Basheer Mohameed layout, Krishnagiri Post, Krishnagiri Taluk and District Pin.635 001 herein after called the party of the first part.
2. Sri.M.Sakthivel S/o.Sri.P.Manickam, aged about 36 years, residing at No.112/121, Bharathiyar St., Newpet, Krishnagiri Post, Krishnagiri Taluk and District Pin.635 001 herein after called the party of the second part.
3. Sri. A.Adiyaman S/o.Sri.Anbzhagan, aged about 39 years, residing at No.62,Ambethkar Nagar, Krishnagiri Post, Krishnagiri Taluk and District Pin.635 001 herein after called the party of the third part.



Baskaran
M. Baskaran
 05/05/2023
 M. BASKARAN, B.A. L.C.
 NOTARY PUBLIC
 11/18, NIELANJANAYAR KOIL ST,
 KRISHNAGIRI-635 001



தமிழ்நாடு தமில்நாடு TAMILNADU

CU 090520



or 100 rs

A M QUALITY STONE
business

B.R. Sathish Kumar
B.R. SATHISH KUMAR
S. V. Lc: 6579/88
Krishnagiri Tamilnadu.

Whereas the partners has mutually agreed to carry on the business in partnership under the name and style of "A M QUALITY STONE" with effect from 05th May 2023 onwards and the parties here to desire to have all the terms and conditions of the partnership reduced to in writing and to have the same duly evidenced by this deed of partnership.



H. Konduk P. S.
M. Sathish Kumar
M. Haskaran
M. HASKARAN, Notary Public,
Krishnagiri, District,
Tamil Nadu.

4. Nature of Business:

The firm shall carry on the business of Granite Products, Building Material Manufacturers, Traders, Processors, Dealers, Importers, Exporters, Merchants, Consultants, Commission Agents and such other activities as mutually agreed by the partners of the firm from time to time for the benefit of the firm.



5. Capital Contribution:

The total capital of the firm is Rs.10,00,000/- (Rupees Ten Lacs only) contributed by the partners as detailed below:

<u>Sl no</u>	<u>Name</u>	<u>Capital in Rs.</u>
1.	Sri.M.Kowshik Dhev	10, 00,000/-
		<u>10, 00,000</u>

The same may be increased or decreased as decided by the partners from time to time after considering the business requirements. The share of profit if any shall be credited to the partner's capital account and loss if any shall be carried forward under the head profit and loss account. The partners are entitled for an interest on capital and current accounts on the fund outstanding at the end of the month @ 1% per month, shall be charged each month or such other rate of interest as agreed by the partners from time to time for the benefit of the firm and the same shall be credited in the partners capital account. The party of the second and third part shall be the working partners of the firm and they have not contributed any capital to the business.

6. Loans and Borrowings:

The firm can borrow the required amount over and above the capital contribution by the partners from financial Institutions, Banks, and partners from such other sources at the rate and condition as decided by the partners from time to time. The loan documents have to be signed by the party of the first part on behalf of the firm.

7. Management of the firm:

The party of the First part Sri.M.Kowshik Dhev shall be the managing partner of the firm and the Managing partner will manage the day to day affairs of the firm. Any one partner has to represent on behalf of the firm to Government departments, taxation matters etc on behalf of the firm. All the partners of the firm will manage the overall business activities.



Signature of M. Baskaran
M. BASKARAN
NOTARY PUBLIC
KANCHI
Signature of H. Kowshik Dhev
Signature of H. Suresh
Signature of H. Srinivas

For the above services rendered to the firm, the partners are eligible for remuneration and the eligible salary and remuneration to the partners shall be calculated and shall not exceed the limit prescribed u/s.40 (b) of the Income-tax act, 1961.



The remuneration to the partners has to be shared by the partners in the following ratio after reducing the salary paid to the partners:

<u>Sl.No.</u>	<u>Name</u>	<u>% of share</u>
1.	Sri. M.Kowshik Dhev	90%
2.	Sri.M.Sakthivel	5%
3.	Sri.A.Adiyaman	5%

8. Accounts and Profit and Loss sharing ratio equally:

Proper books of accounts shall be maintained in the usual course of business and the same shall be closed on 31st March in each year to ascertain the net profit or loss of the firm for that year. The interest and remuneration payable to the partners and the taxes due and payable on the taxable income of the firm for the year shall be treated as common item of expenditure. Balance Sheet shall be prepared as on 31st March every year and the net profit or loss of the firm so arrived at shall be divided between the partners and the share be credited or debited as the case may be in the respective current accounts of such partners in the following sharing ratio.

<u>Sl.No.</u>	<u>Name</u>	<u>% of share</u>
1.	Sri. M.Kowshik Dhev	98%
2.	Sri.M.Sakthivel	1%
3.	Sri.A.Adiyaman	1%

9. Duration of the Firm:

The duration of the firm will be at will. On death, retirement expulsion or admission of the partners shall not have the effect of dissolution of the firm.

10. ADMISSION, RETIREMENT, EXPULSION OF PARTNERS AND DISSOLUTION OF THE FIRM:

- a) **Admission:** The new partner shall be admitted to the firm by party of the first part for the benefit of the firm.
- b) **Retirement:** Any partner, desiring to retire from the firm shall do so by giving a month's notice in writing to the other partners.

Dissolution: Death, Retirement or expulsion of a partner shall not have the effect of dissolving the firm. In particular, no partner has the right to demand dissolution of the



Deformation
M. Baskaran
 M. BASKARAN
 20-07-2014

H. Kowshik Dhev
H. Sakthivel
A. Adiyaman

d) The party of the first part has the absolute right to remove any one of the partner without assigning any reason for the same as per his sole decision. The outgoing partner can claim only his fund balance in the capital account and not have any benefit from the valuation of assets, goodwill of the firm, lease hold right or any right in the all type of assets of the firm etc.



11. SETTLEMENT OF ACCOUNTS AND RIGHTS OF THE PARTNER

In the event of retirement of partners and the dissolution of the firm for the purpose of settlement of rights and accounts between the partners, the party of second and third part is only working partner and not having any right in the assets of the business.

The party of the second and thirds part is not having any rights in the assets of the firm, lease rights or goodwill etc. The outgoing partner can have the right to claim his capital fund in the firm after adjusting gain or loss and provisions if any. In all the matters of the party of the firm the decision of the party of the first part is final. The party of the first part has total rights over the assets of the firm.

12. Bank Operation:

The bank accounts shall be opened in the firm name and operated in any Scheduled banks and such bank account shall be operated by First Part of the partner signing the banking documents and instruments on behalf of the firm individually for the benefit of the firm.

13. ARBITRATION:

If there is any difference of opinion or disputes between the partner of the firm all matters in difference in relation to the partnership affairs and between partner shall be referred Smt.K.M.Vijaya as single arbitrator according to the provisions of the Arbitration Act in force in India and decision of the arbitrator is final.

14. APPLICATION OF INDIAN PARTNERSHIP ACT.1932:

Except Provision mentioned above in this deed to the contrary, all the other provisions of the Indian Partnership Act.1932 shall be applicable to the firm.

In witness, the parties hereto affix their signatures to this deed on the day, month and year, herein above first mentioned.

WITNESS :-

1. [Signature]
 (R. Arumugam)
 2/498C, Veeravegar Enchattu
 Kumbakonam.

2. [Signature]
 (K.V. VENKATASWAMY)
 67, Vaidyanathan
 15/20 K. R. S. Ramaswami
 K. R. S. Ramaswami

1. [Signature]
 2. [Signature]
 3. [Signature]



[Signature]
 S. DHANASEKAR, M.Sc., (Geo)
 Qualified Person

ANAND
 10 NOV 2023
 AADHAAR



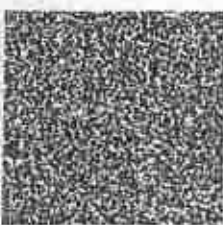
இந்திய அரசாங்கம்
 Government of India

இந்திய தனிப்பட்ட அடையாள ஆணைய அமைதி
 Unique Identification Authority of India

பதிவுக் கு எண் / Enrolment No.: 2043/99107/01532

To
 எம்.கொஷிக் தேவ்
 M.Kowshik Dhev
 S/O: Mathiazhagan
 D NO 588
 GANEHI NAGAR
 BASHEER MOHAMMED LAYOUT
 KRUSHNAGIRI
 Krishnagiri
 Krishnagiri Tamil Nadu - 635001 -
 9443244390

Signature valid



உங்கள் ஆதார் எண் / Your Aadhaar No. :

8065 5954 7556
 VID : 9126 2376 0938 0791

எனது ஆதார், எனது அடையாளம்




தகவல் / INFORMATION

- ஆதார் என்பது அடையாளம் காணும் குடிபதிவுக்காகக் காணும் அல்ல
- ஆதார் தனித்துவமானது மற்றும் பாதுகாப்பானது
- பாதுகாப்பான 0 9 குறியீடு ஆட்களின் x m l / ஆண்மை அங்கீகாரத்தைப் பயன்படுத்தி அடையாளத்தைச் சரிபார்க்கவும்
- ஆதார் நடவடிக்கை பிவிசி கார்டுகள் 12 ஆதார் மற்றும் எம் ஆதார் போன்ற அனைத்து வகையான ஆதாரங்களும் சமமாக செயல்படும் 12 இலக்க ஆதார் எண்ணுக்கு பதிலாக பெய்ரிக்கர் ஆதார் அடைபாள்முறை (பல பயன்படுத்தலாம்)
- 10 ஆண்டுகளுக்கு ஒரு முறையாவது ஆதார் புதுப்பிக்கவும்
- பிஐஐஏ அங்க மற்றும் அங்க கார்டு உடன்கள் / சென்சைன்ஸ் பெற ஆதார் உங்களுக்கு உதவிற்று
- உங்களை மொசைப் என் மற்றும் மின்னஞ்சல் மூலம் ஆதாரில் புதுப்பிக்கவும்
- ஆதார் சென்சைன்ஸ் பெற உங்களை மொசைப் உடன்கள் எம் ஆதார் சென்சைன்ஸ் பதிவுகளுக்கும்
- பாதுகாப்பை உறுதிப்படுத்த ஆதார் / பெய்ரிக்கர்கள் வாக / அன்வாக் அங்கீகாரம் பயன்படுத்தவும்
- ஆதார் கோரும் திறவுகோல் உரிய ஒப்புதலைப் பெற வேண்டும்
- Aadhaar is a proof of identity, not of citizenship.
- Aadhaar is unique and secure.
- Verify identity using secure QR code/offline XML/online Authentication.
- All forms of Aadhaar like Aadhaar letter, PVC Cards, eAadhaar and mAadhaar are equally valid. Virtual Aadhaar Identity (VID) can also be used in place of 12 digit Aadhaar number.
- Update Aadhaar at least once in 10 years.
- Aadhaar helps you avail various Government and Non-Government benefits/services.
- Keep your mobile number and email id updated in Aadhaar.
- Download mAadhaar app on smart phones to avail Aadhaar Services.
- Use the feature of lock/unlock Aadhaar/biometrics to ensure security.
- Entities seeking Aadhaar are obligated to seek due consent.

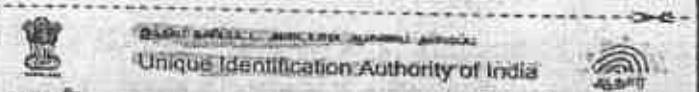


எம்.கொஷிக் தேவ்
 M.Kowshik Dhev
 பிறந்த நாள்/DOB: 30/01/1995
 ஆண் / MALE



8065 5954 7556
 VID : 9126 2376 0938 0791

எனது ஆதார், எனது அடையாளம்



முகவரி:
 த/பெ: மதியழகன், கடை 583, காந்தி நகர்,
 பள்ளி முகப்பு மே.கவுட., கிருஷ்ணகிரி,
 கிருஷ்ணகிரி, கிருஷ்ணகிரி,
 தமிழ் நாடு - 635001

Address:
 S/O: Mathiazhagan, D NO 588, GANEHI
 NAGAR, BASHEER MOHAMMED LAYOUT,
 KRUSHNAGIRI, Krishnagiri, Krishnagiri,
 Tamil Nadu - 635001



8065 5954 7556
 VID : 9126 2376 0938 0791

1800 | Help-Outside.gov.in | www.uidai.gov.in

S. DHANASEKAR, M.Sc., (Geo)
 Qualified Person

Reg. No 01BBB1005
Col Code 106 / 106



அறிவியல் புலம்

FACULTY OF SCIENCE

பெரியார் பல்கலைக்கழக ஆட்சிக்குழு 2003 ஆம் ஆண்டு ஏப்ரல் மாதம்
நடந்த பயன்பாட்டு புவியமைப்பியல் தேர்வில்
S தனசேகர் என்பவர்
முதல் வகுப்பில் தேர்ச்சி பெற்றார் என்று தக்க தேர்வாளர்கள்
சான்றளித்தபடி அறிவியல் நிறைஞர் என்னும்
பட்டத்தை அவருக்குப் பல்கலைக்கழக இலச்சிணையுடன் வழங்குகிறது.

*The Syndicate of the Periyar University hereby makes known
that DHANASEKAR S has been
admitted to the DEGREE OF MASTER OF SCIENCE in
APPLIED GEOLOGY*

*he/she having been certified by duly appointed Examiners to be qualified
to receive the same and was placed in the FIRST CLASS at the
Examination held in APRIL 2003*



Given under the seal of this University

நாள்

Dated 15-09-2004

சேலம் 636011, தமிழ்நாடு, இந்தியா.
Salem 636011, TamilNadu, India.

MR
பதிவாளர்
Registrar

S. S.
துணைவேந்தர்
Vice-Chancellor

S. S.
S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

PRITHVI MINERALS,



ANNE
: 04288 - 262489
VARANALLAMPALAYAM,
ALATHUR POST 637 303,
SANKARI Tk, Salem DL, Tamil Nadu


Date : ... 27.12.08.

TO WHOMSOEVER IT MAY CONCERN

This is to certify that SHRI S. DHANASEKAR, S/o. Shri A. Sundaram residing at No.8/3, Kullappan Street, Omalur Taluk, Salem District - 636 455 is working in our mines for the date of 15.10.2003 to till date as Geologist. During the above tenure of service his execution of the assigned work is exemplary and worth mentioning. We wish him success in his future endeavours.

For PRITHVI MINERALS,


(T.P. THANGAVEL.)
Partner


S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

செயற்குறி அலுவலகம்
சென்னை
10 NOV 2023
சென்னை
சென்னை

PHOTO SHOWN PROPOSED LEASE AREA VIEW



PHOTO SHOWN PROPOSED LEASE AREA VIEW-2



S. Dhanasekar
S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

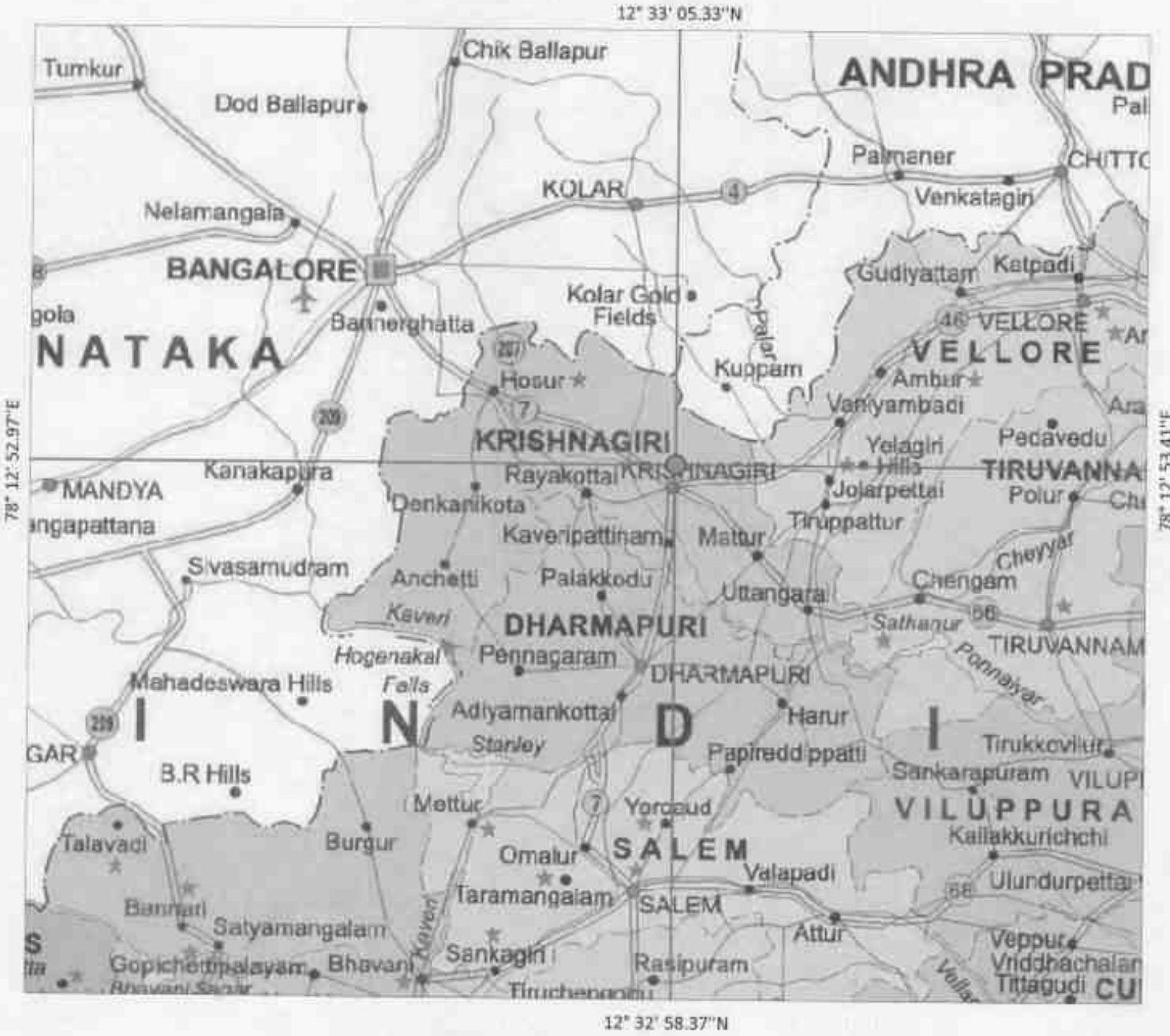



PLATE NO.1	
DATE OF SURVEY: 16-10-2023	
APPLICANT ADDRESS: M/S. A.M.QUALITY STONE, S.F.No:87/1B1 & 87/1B2, AKKALAPURAM, KOTHAPETTA VILLAGE, KRISHNAGIRI TALUK, KRISHNAGIRI DISTRICT- 635 001.	
LOCATION OF QUARRY	
EXTENT	: 4.74.90 Ha,
S.F.Nos	: 87/1B1B & 87/1B2B,
VILLAGE	: KOTHAPETTA,
TALUK	: KRISHNAGIRI,
DISTRICT	: KRISHNAGIRI.
INDEX	
QUARRY LEASE AREA	: ●
TOPO SHEET NO.:	57 L/02
LATITUDE	: 12° 33' 05.33" N to 12° 32' 58.37" N
LONGITUDE:	78° 12' 53.41" E to 78° 12' 52.97" E
LOCATION PLAN	
NOT TO SCALE	
PREPARED BY:	
I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME, AND IS CORRECT TO THE BEST OF MY KNOWLEDGE.	
 S. DHANASEKAR, JCN, QUALIFIED PERSON	



PLATE NO:IA	
DATE OF SURVEY: 16-10-2023	
APPLICANT ADDRESS: M/S. A.M.QUALITY STONE, S.F.No:87/1B1 & 87/1B2, AKKALAPURAM, KOTHAPETTA VILLAGE, KRISHNAGIRI TALUK, KRISHNAGIRI DISTRICT- 635 001.	
LOCATION OF QUARRY	
EXTENT	: 4.74.90 Ha,
S.F.Nos	: 87/1B1B & 87/1B2B,
VILLAGE	: KOTHAPETTA,
TALUK	: KRISHNAGIRI,
DISTRICT	: KRISHNAGIRI.
INDEX	
QUARRY LEASE AREA	
ROAD	
ROUTE MAP	
NOT TO SCALE	
PREPARED BY:	
I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE.	
 S. DHANASEKAR, M.Sc. QUALIFIED PERSON	



PILLAR NO	LATITUDE	LONGITUDE
1	12° 32' 58.37"N	78° 12' 52.97"E
2	12° 33' 04.48"N	78° 12' 47.51"E
3	12° 33' 04.86"N	78° 12' 50.12"E
4	12° 33' 05.33"N	78° 12' 53.41"E
5	12° 32' 59.76"N	78° 12' 59.44"E
6	12° 32' 59.07"N	78° 12' 56.20"E
DATUM WGS-84		

582 A

APPLICANT ADDRESS

M/E - A.M. QUALITY STONE,
S.F. No: 87/181 & 87/182,
AKKALAPURAM,
KOTHAPETTA VILLAGE,
KRISHNAGIRI TALUK,
KRISHNAGIRI DISTRICT- 588 001.

LOCATION OF QUARRY

EXTENT : 4.74.90 Ha,
S.F. Nos : 87/181B & 87/192B,
VILLAGE : KOTHAPETTA,
TALUK : KRISHNAGIRI,
DISTRICT : KRISHNAGIRI

SATELLITE IMAGE

(LEASE AREA)
SCALE: 1:1000

PREPARED BY:

I DO HEREBY CERTIFY THAT THE P.L.A.T.E.
HAS BEEN CHECKED BY ME AND IS CORRECT
TO THE BEST OF MY KNOWLEDGE


EDHANASREEKAR M.S.
QUALIFIED PERSON

12° 33' 05.33"N
78° 12' 53.41"E



12° 33' 04.48"N
78° 12' 47.51"E

12° 32' 59.76"N
78° 12' 59.44"E

12° 32' 58.37"N
78° 12' 52.97"E

583 A

PLATE NO:ID

DATE OF SURVEY: 16-10-2023




APPLICANT ADDRESS:

M/S. A.M.QUALITY STONE,
S.F.No:87/1B1 & 87/1B2,
AKKALAPURAM,
KOTHAPETTA VILLAGE,
KRISHNAGIRI TALUK,
KRISHNAGIRI DISTRICT- 635 001.

LOCATION OF QUARRY

EXTENT : 4.74.90 Ha,
S.F.Nos : 87/1B1B & 87/1B2B,
VILLAGE : KOTHAPETTA,
TALUK : KRISHNAGIRI,
DISTRICT : KRISHNAGIRI.

INDEX

QUARRY LEASE BOUNDARY 
500M RADIUS 
300M RADIUS 

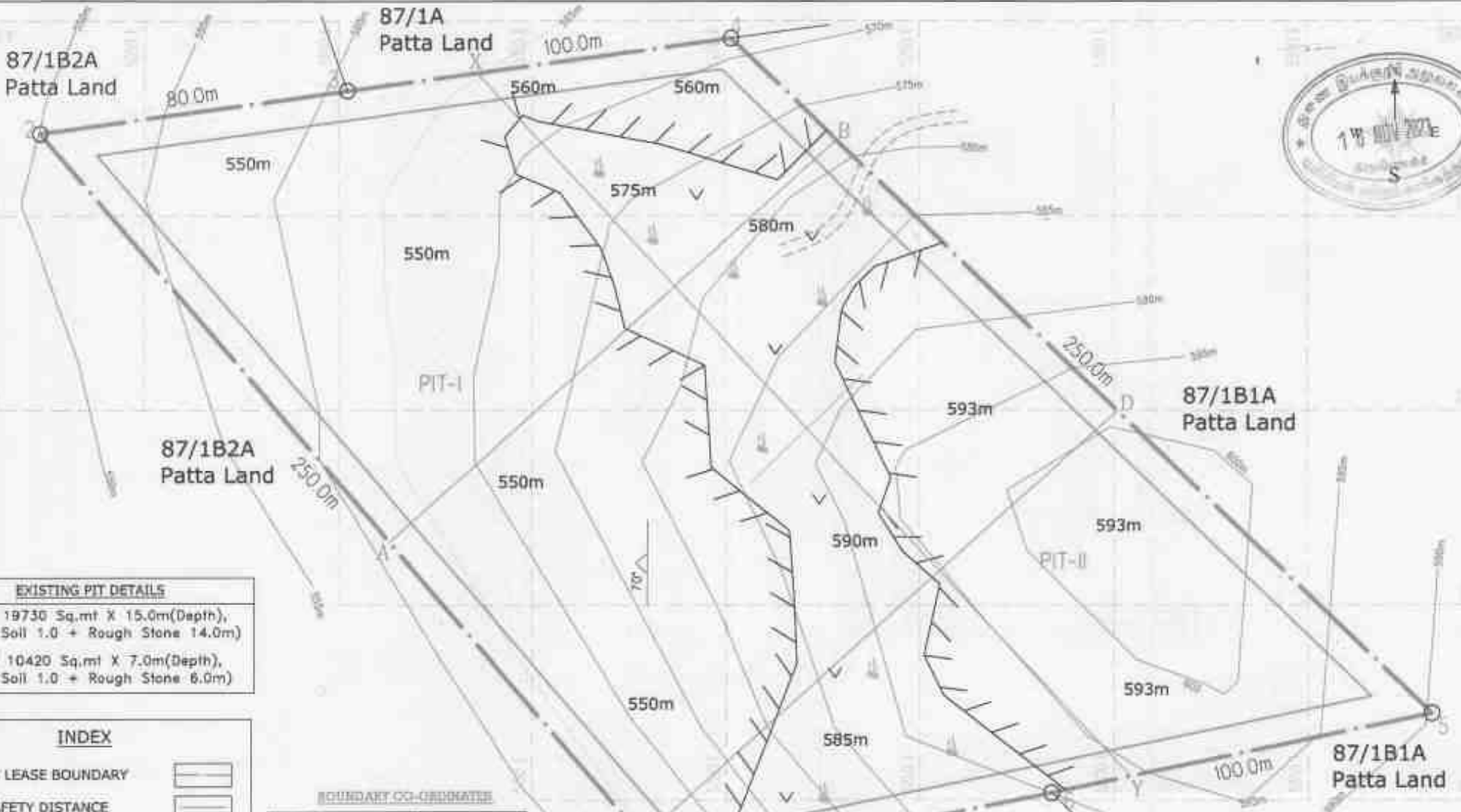
SATELLITE IMAGE
(500m RADIUS)

SCALE: 1:5000

PREPARED BY:

I DO HEREBY CERTIFY THAT THE PLATE
HAS BEEN CHECKED BY ME AND IS CORRECT
TO THE BEST OF MY KNOWLEDGE.


S.DHYANANAGAR,M.S.,
QUALIFIED PERSON



EXISTING PIT DETAILS

PIT-I 19730 Sq.mt X 15.0m(Depth),
(Top Soil 1.0 + Rough Stone 14.0m)

PIT-II 10420 Sq.mt X 7.0m(Depth),
(Top Soil 1.0 + Rough Stone 6.0m)

INDEX

QUARRY LEASE BOUNDARY	
7.5m SAFETY DISTANCE	
BOUNDARY PILLARS	
TEMPORARY BENCH MARK	
TOP SOIL	
ROUGH STONE	
EXISTING PIT	
STRIKE AND DIP	
CONTOUR LINE	
QUARRY ROAD	
SHRUB	

BOUNDARY CO-ORDINATES

PILLAR NO	LATITUDE	LONGITUDE
1	12° 32' 58.37"N	78° 12' 52.97"E
2	12° 32' 04.48"N	78° 12' 47.61"E
3	12° 32' 04.86"N	78° 12' 50.12"E
4	12° 32' 06.30"N	78° 12' 53.41"E
5	12° 32' 59.76"N	78° 12' 58.44"E
6	12° 32' 09.07"N	78° 12' 56.30"E

DATUM WGS-84

EXISTING PIT DIMENSION

PIT - I = 19730 Sq.mt X 15m Depth
PIT - II = 10420 Sq.mt X 7m Depth

APPLICANT ADDRESS:
M/S. A. H. QUALITY STORE,
S.F.No-87/1B1 & 87/1B2,
AKKALAPURAM,
KOTHAPETTA VILLAGE,
KRISHNAGIRI TALUK,
KRISHNAGIRI DISTRICT - 635 001.

LOCATION OF QUARRY

EXTENT : 4.74.90 Ha,
S.F.No : 87/1B1 & 87/1B2B,
VILLAGE : KOTHAPETTA,
TALUK : KRISHNAGIRI,
DISTRICT : KRISHNAGIRI.

PLATE NO:III
DATE OF SURVEY: 16-10-2023

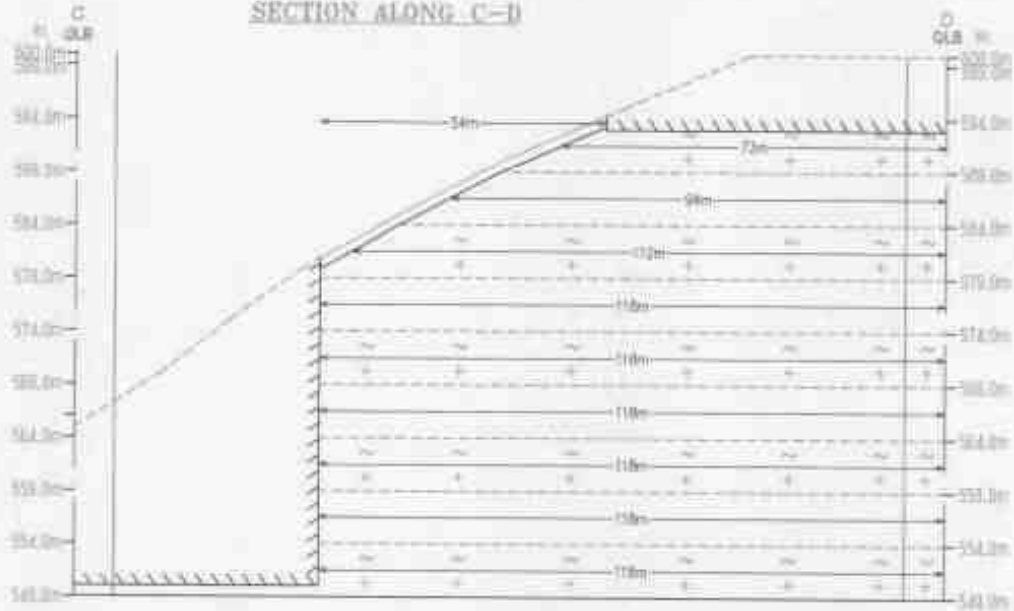
SURFACE AND GEOLOGICAL PLAN
SCALE: 1:1000

PREPARED BY:
I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE.

S. SRIHARASEKAR M.S.
QUALIFIED PERSON



SECTION ALONG C-D



TOTAL DEPTH = 45m

PLATE NO:III-B

DATE OF SURVEY: 16-10-2023

APPLICANT ADDRESS:

M/S. A.M.QUALITY STONE,
S.F.No:87/1B1 & 87/1B2,
AKKALAPURAM,
KOTHAPETTA VILLAGE,
KRISHNAGIRI TALLUK,
KRISHNAGIRI DISTRICT- 635 001.

LOCATION OF QUARRY

EXTENT : 4.74.90 Ha,
S.F.Nos : 87/1B1B & 87/1B2B,
VILLAGE : KOTHAPETTA,
TALUK : KRISHNAGIRI,
DISTRICT : KRISHNAGIRI.

INDEX

QUARRY LEASE BOUNDARY



7.5m SAFETY DISTANCE



TOP SOIL



ROUGH STONE



EXISTING PIT



GEOLOGICAL SECTIONS

SECTION- HOR-1 : 1000
VER-1 : 500

PREPARED BY:

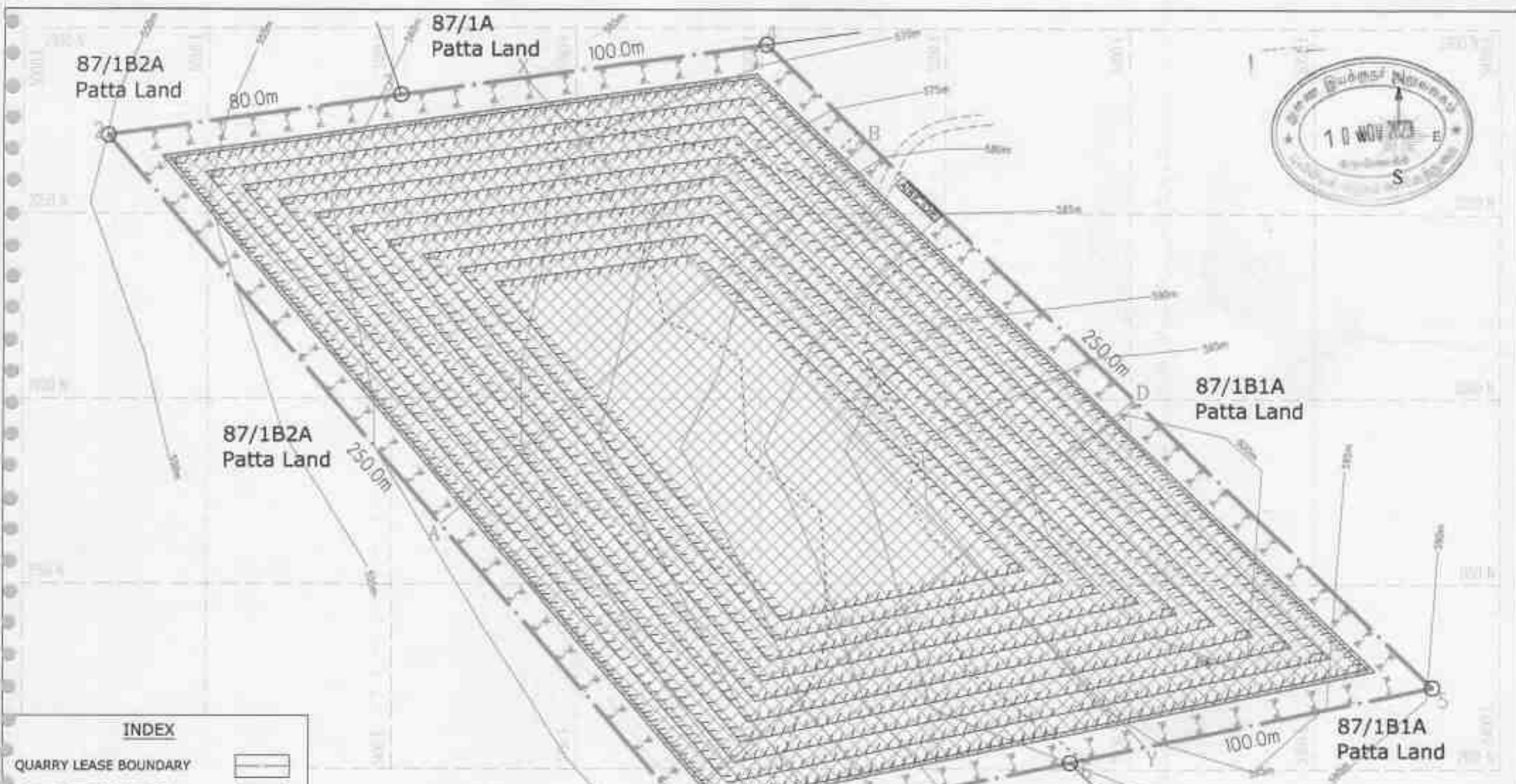
I DO HEREBY CERTIFY THAT THE PLATE
HAS BEEN CHECKED BY ME AND IS CORRECT
TO THE BEST OF MY KNOWLEDGE!

S. J. Anand
S. J. ANAND
QUALIFIED PERSON

GEOLOGICAL RESERVES

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume In M3	Geological Reserves in m3 @ 100%	Top Soil in m3
XY-AB	I	109	73	1			7957
	II	5	1	5	25	25	
	III	28	1	5	140	140	
	IV	57	73	5	20805	20805	
	V	87	73	5	31755	31755	
	VI	109	73	5	39785	39785	
	VII	109	73	5	39785	39785	
	VIII	125	73	5	45625	45625	
	IX	125	73	5	45625	45625	
TOTAL					223545	223545	7957
XY-CD	I	28	54	1			1512
	II	104	73	4	30368	30368	
	III	122	94	5	57340	57340	
	IV	122	112	5	68320	68320	
	V	122	118	5	71980	71980	
	VI	122	118	5	71980	71980	
	VII	122	118	5	71980	71980	
	VIII	122	118	5	71980	71980	
	IX	122	118	5	71980	71980	
	X	122	118	5	71980	71980	
TOTAL					587908	587908	1512
GRAND TOTAL					811453	811453	9469

586 A



INDEX	
QUARRY LEASE BOUNDARY	
7.5m SAFETY DISTANCE	
BOUNDARY PILLARS	
TEMPORARY BENCH MARK	
TOP SOIL	
ROUGH STONE	
QUARRY PIT	
CONTOUR LINE	
QUARRY ROAD	
PROPOSED TOP SOIL DUMP	

A- OFFICE
B- STORE
C- FIRST AID
D- REST ROOM
E- TOILET

I-YEAR PROPOSED EXCAVATION	
II-YEAR PROPOSED EXCAVATION	
III-YEAR PROPOSED EXCAVATION	
IV-YEAR PROPOSED EXCAVATION	
V-YEAR PROPOSED EXCAVATION	

DUMP WASTE DETAILS
Top Soil Dump = 8706 Cbm (6330 Sqm X 1.37m(H))

APPLICANT ADDRESS:
 M/S. A.H. QUALITY STONE,
 S.F. No: 87/1B1 & 87/1B2,
 AKKALAPURAM,
 KOTHAPETTA VILLAGE,
 KRISHNAGIRI TALUK,
 KRISHNAGIRI DISTRICT- 635 001.

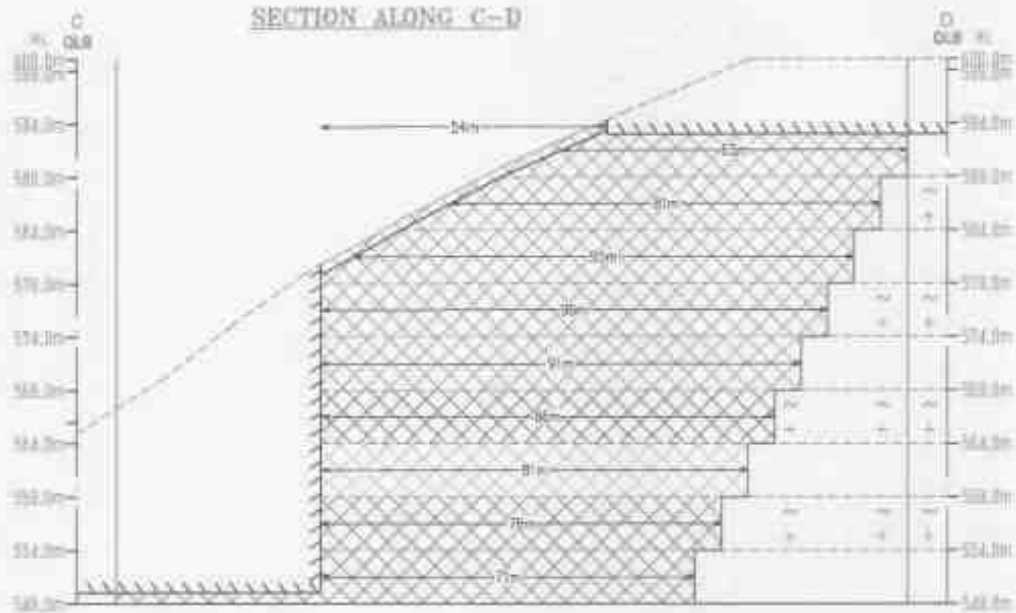
LOCATION OF QUARRY
 EXTENT : 4.74.90 Ha,
 S.F. Nos : 87/1B1B & 87/1B2B,
 VILLAGE : KOTHAPETTA,
 TALUK : KRISHNAGIRI,
 DISTRICT : KRISHNAGIRI.

PLATE NO:IV
 DATE OF SURVEY: 16-10-2023

YEARWISE DEVELOPMENT & PRODUCTION PLAN
 SCALE: 1:1000

PREPARED BY:
 I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE

S. Jeyamasekaran,
 QUALIFIED PERSON



TOTAL DEPTH = 45m

I-YEAR PROPOSED EXCAVATION	
II-YEAR PROPOSED EXCAVATION	
III-YEAR PROPOSED EXCAVATION	
IV-YEAR PROPOSED EXCAVATION	
V-YEAR PROPOSED EXCAVATION	

YEARWISE DEVELOPMENT AND PRODUCTION										
Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in M3	Recoverable Reserve in m3 @ 100%	Top Soil in m3		
I-YEAR	XY-AB	I	109	46	1			7194		
		II	5	1	5	25	25			
		III	29	1	5	140	140			
	XY-CD	I	29	54	1				1512	
		II	95	65	4	24700	24700			
		III	109	81	3	43740	43740			
		IV	103	95	5	48925	48925			
Total						117530	117530	8706		
II-YEAR	XY-AB	IV	57	85	5	18525	18525			
		V	87	90	5	26100	26100			
		V	98	96	5	47040	47040			
	XY-CD	VI	93	91	5	42315	42315			
		Total						133980	133980	
		III-YEAR	XY-AB	VI	109	55	5	29975	29975	
XY-CD	VII		88	86	5	37840	37840			
Total						67815	67815			
IV-YEAR	XY-AB	VII	109	50	5	27250	27250			
	XY-CD	VIII	83	81	5	33615	33615			
Total						60865	60865			
V-YEAR	XY-AB	VIII	111	45	5	24975	24975			
		IX	106	40	5	21300	21300			
		IX	78	76	5	29640	29640			
	XY-CD	X	73	71	5	25915	25915			
		Total						101730	101730	
GRAND TOTAL						481920	481920	8706		

589 A

PLATE NO:IV-B

DATE OF SURVEY: 16-10-2023

APPLICANT ADDRESS

M/S. A.M.QUALITY STONE,
S.F.No:87/1B1 & 87/1B2,
AKKALAPURAM,
KOTHAPETTA VILLAGE,
KRISHNAGIRI TALUK,
KRISHNAGIRI DISTRICT- 635 001.

LOCATION OF QUARRY

EXTENT : 4.74.90 Ha,
S.F.Nos : 87/1B1B & 87/1B2B,
VILLAGE : KOTHAPETTA,
TALUK : KRISHNAGIRI,
DISTRICT : KRISHNAGIRI.

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QUARRY LEASE BOUNDARY	
7.5m SAFETY DISTANCE	
TOP SOIL	
ROUGH STONE	
QUARRY PIT	

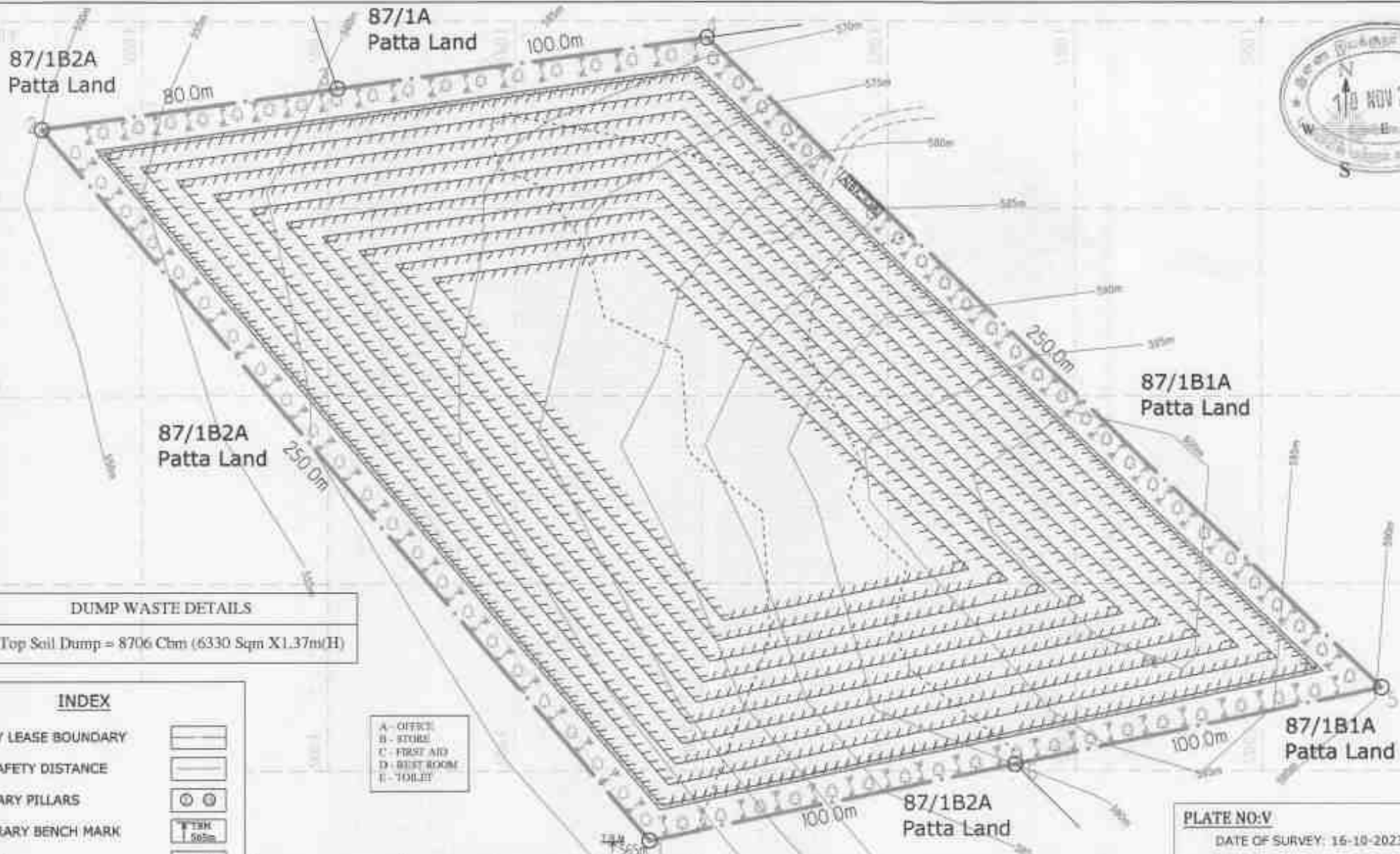
YEARWISE DEVELOPMENT & PRODUCTION SECTIONS

SECTION- HOR-1 :1000
VER-1 : 500

PREPARED BY:

I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE

S. MAHANARAYAN,
QUALIFIED PERSON



DUMP WASTE DETAILS
 Top Soil Dump = 8706 Cbm (6330 Sqm X 1.37m/H)

INDEX

QUARRY LEASE BOUNDARY	
7.5m SAFETY DISTANCE	
BOUNDARY PILLARS	
TEMPORARY BENCH MARK	
TOP SOIL	
ROUGH STONE	
QUARRY PIT	
CONTOUR LINE	
QUARRY ROAD	
MINE LAYOUT	
PROPOSED TOP SOIL DUMP	

A - OFFICE
 B - STORE
 C - FIRST AID
 D - REST ROOM
 E - TOILET

DESCRIPTION	PRESENT AREA (Ha)	AREA IN USE DURING THE QUARRYING PERIOD (Ha)	COLOR CODE
AREA UNDER QUARRYING	3.00.00	3.52.00	
INFRASTRUCTURE	NIL	0.01.00	
ROADS	0.01.00	0.01.00	
GREEN BELT & DUMP	NIL	1.40.90	
UN-UTILIZED AREA	1.73.90	NIL	
GRAND TOTAL	4.74.90	4.74.90	

- I - Year PROPOSED PLANTATION
- II - Year PROPOSED PLANTATION
- III - Year PROPOSED PLANTATION
- IV - Year PROPOSED PLANTATION
- V - Year PROPOSED PLANTATION

APPLICANT ADDRESS:
 M/S. A.M. QUALITY STONE,
 S.F.No: 87/1B1 & 87/1B2,
 AKKALAPURAM,
 KOTHAPETTA VILLAGE,
 KRISHNAGIRI TALUK,
 KRISHNAGIRI DISTRICT- 635 001.

LOCATION OF QUARRY
 EXTENT : 4.74.90 Ha,
 S.F.No : 87/1B1B & 87/1B2B,
 VILLAGE : KOTHAPETTA,
 TALUK : KRISHNAGIRI,
 DISTRICT : KRISHNAGIRI.

PLATE NO: V
 DATE OF SURVEY: 15-10-2023

MINE LAYOUT/ LAND USE PATTERN & AFFORESTATION PLAN

SCALE: 1:1000

PREPARED BY:
 I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE

S. SRIHANASEKARAM S.C.
 QUALIFIED PERSON

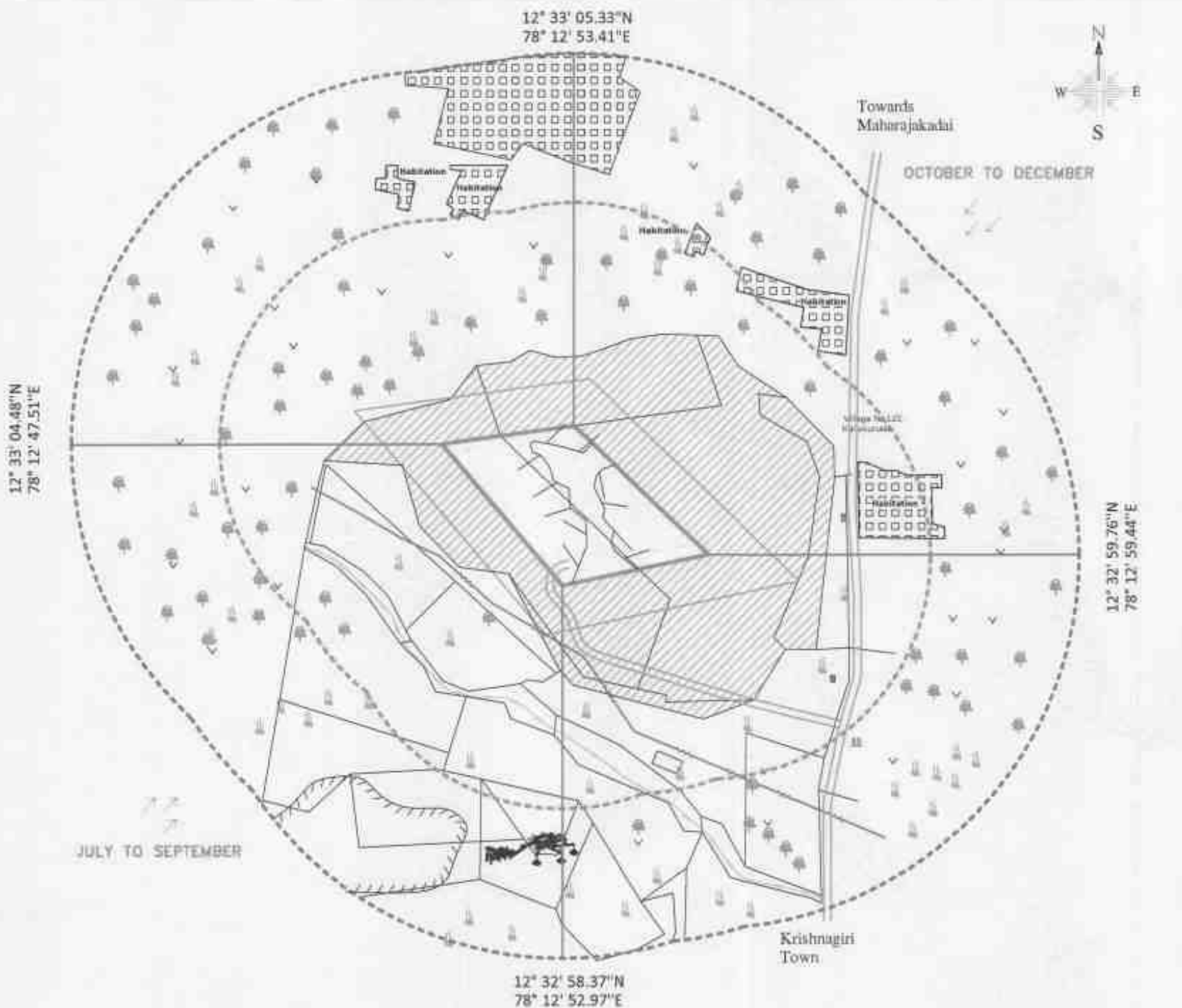


PLATE NO:VI
 DATE OF SURVEY: 16-10-2023
 APPLICANT ADDRESS:
 M/S. A.M.QUALITY STONE,
 S.F.No:87/1B1 & 87/1B2,
 AKKALAPURAM,
 KOTHAPETTA VILLAGE,
 KRISHNAGIRI TALUK,
 KRISHNAGIRI DISTRICT- 635 001

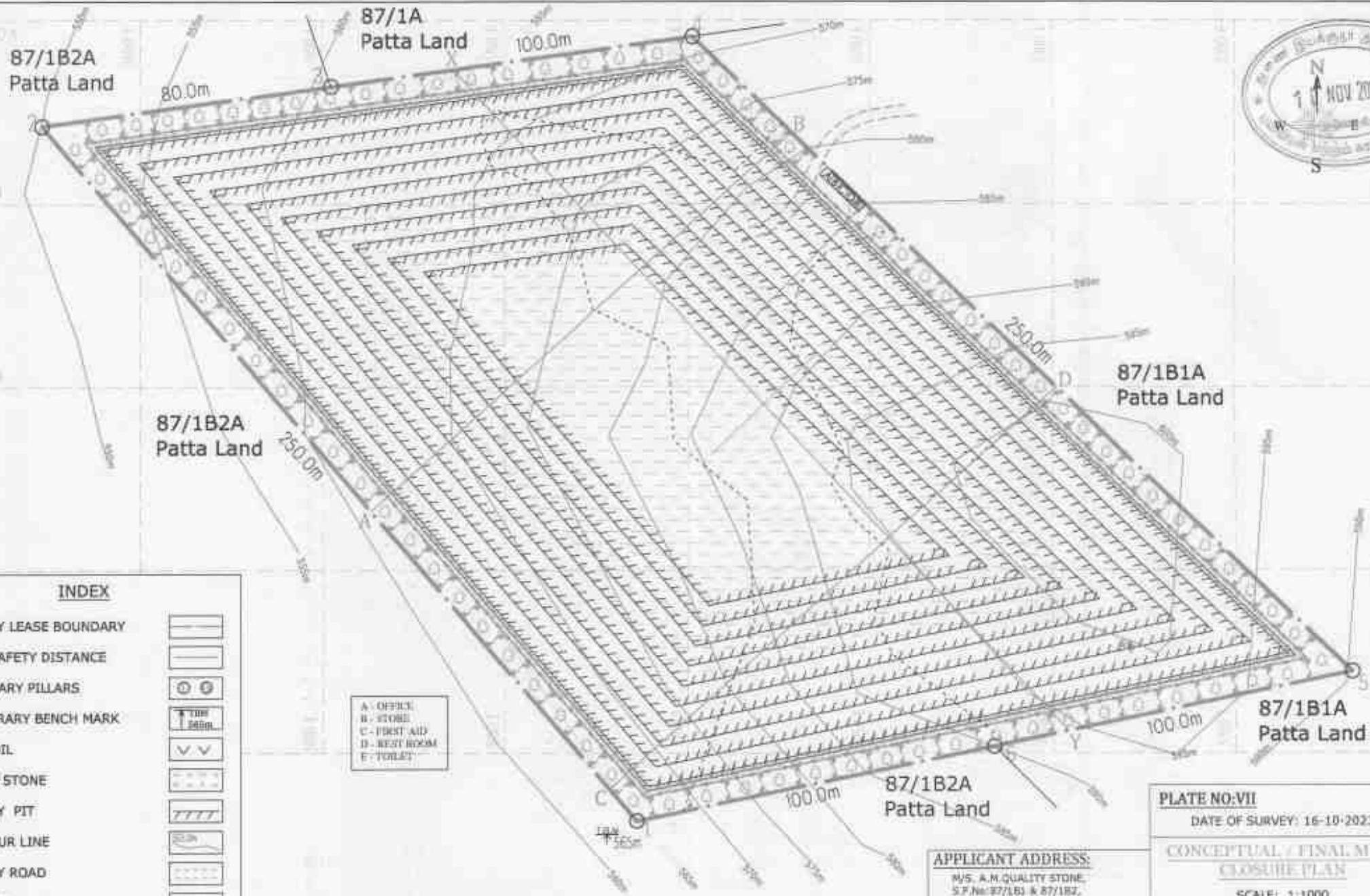
LOCATION OF QUARRY
 EXTENT : 4.74.90 Ha,
 S.F.Nos : 87/1B1B & 87/1B2B,
 VILLAGE : KOTHAPETTA,
 TALUK : KRISHNAGIRI,
 DISTRICT : KRISHNAGIRI.

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QUARRY LEASE BOUNDARY	
500M RADIUS	
300M RADIUS	
60M RADIUS	
VILLAGE ROAD	
QUARRY ROAD	
TREES	
CRUSHER UNIT	
DRY AGRICULTURAL LAND	
WIND DIRECTION	
ADJACENT QUARRY	
INFRASTRUCTURES	
HILLOCK	
SEASONAL STREAM (ODAI)	
LOW POWER EB LINE	
SHRUB	

ENVIRONMENT PLAN
 SCALE: 1:5000

PREPARED BY:
 I DO HEREBY CERTIFY THAT THE PLATE
 HAS BEEN CHECKED BY ME AND IS CORRECT
 TO THE BEST OF MY KNOWLEDGE
 S. KRISHNASEKAR, M.S.,
 QUALIFIED PERSON



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- QUARRY LEASE BOUNDARY
- 7.5m SAFETY DISTANCE
- BOUNDARY PILLARS
- TEMPORARY BENCH MARK
- TOP SOIL
- ROUGH STONE
- QUARRY PIT
- CONTOUR LINE
- QUARRY ROAD
- FENCING
- PARAPET WALL
- ULTIMATE PIT LIMIT
- PROPOSED WATER STORAGE
- PROPOSED TOP SOIL DUMP

- A - OFFICE
- B - STORE
- C - FIRST AID
- D - REST ROOM
- E - TOILET

V Yr Afforestation

DUMP WASTE DETAILS
 Top Soil Dump = 8706 Chm (6330 Sqm X 1.37m(H))

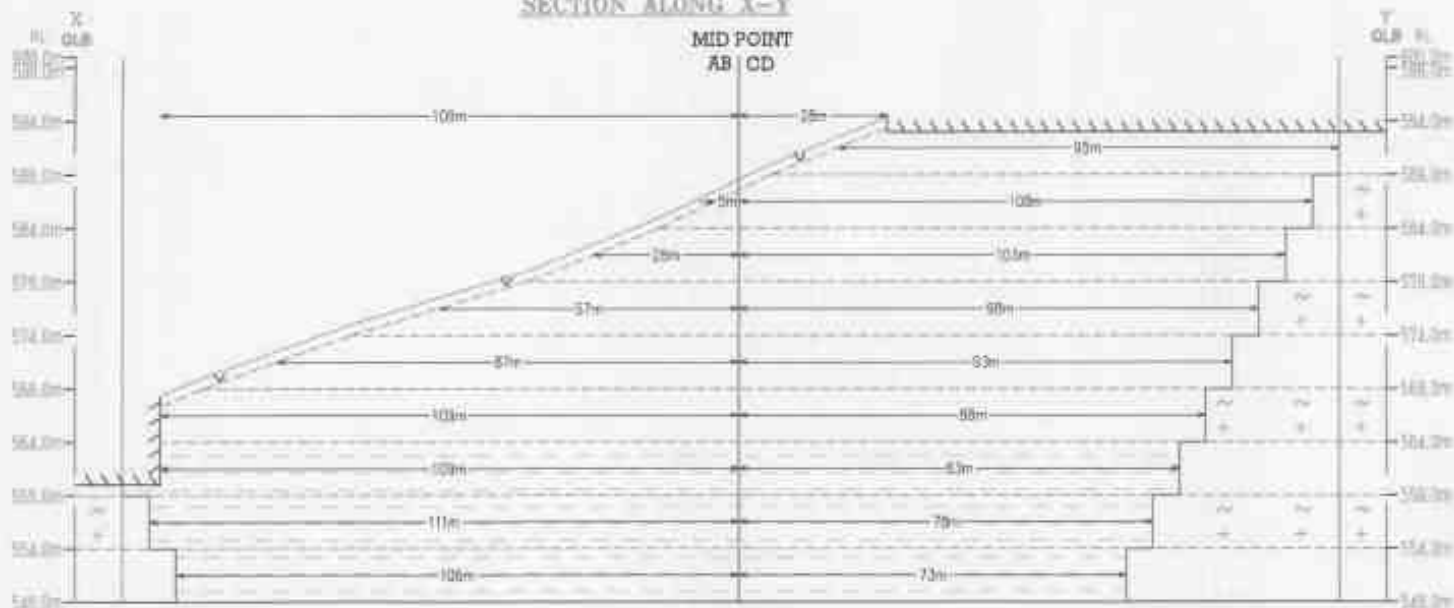
APPLICANT ADDRESS:
 M/S. A.M. QUALITY STORE,
 S.F. No: 87/1B1 & 87/1B2,
 AKKALAPURAM,
 KOTHAPETTA VILLAGE,
 KRISHNAGIRI TALUK,
 KRISHNAGIRI DISTRICT- 835 001.

LOCATION OF QUARRY
 EXTENT : 4.74.90 Ha,
 S.F. No : 87/1B1 & 87/1B2,
 VILLAGE : KOTHAPETTA,
 TALUK : KRISHNAGIRI,
 DISTRICT : KRISHNAGIRI

PLATE NO:VII
 DATE OF SURVEY: 16-10-2023
CONCEPTUAL / FINAL MINE CLOSURE PLAN
 SCALE: 1:1000
PREPARED BY:
 I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE.
 S. DHANASEKAR, M.C.
 QUALIFIED PERSON



SECTION ALONG X-Y



TOTAL DEPTH = 45m

PLATE NO: VII-A

DATE OF SURVEY: 16-10-2023

APPLICANT ADDRESS:

M/S. A.M. QUALITY STONE,
S.F.No:87/1B1 & 87/1B2,
AKKALAPURAM,
KOTHAPETTA VILLAGE,
KRISHNAGIRI TALUK,
KRISHNAGIRI DISTRICT- 635 001.

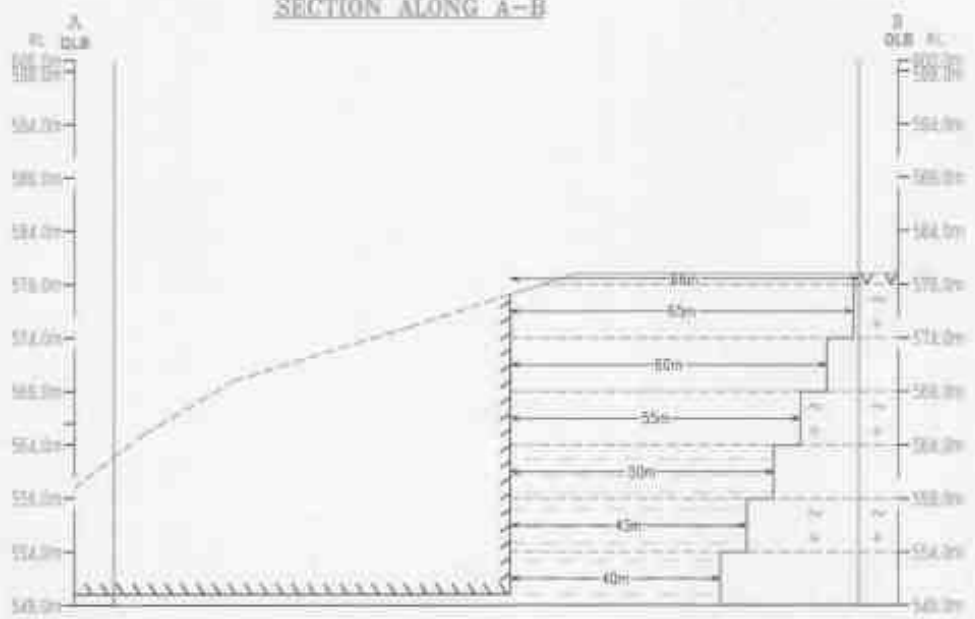
LOCATION OF QUARRY

EXTENT : 4.74.90 Ha,
S.F.Nos : 87/1B1B & 87/1B2B,
VILLAGE : KOTHAPETTA,
TALUK : KRISHNAGIRI,
DISTRICT : KRISHNAGIRI.

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QUARRY LEASE BOUNDARY	
7.5m SAFETY DISTANCE	
TOP SOIL	
ROUGH STONE	
QUARRY PIT	
PROPOSED WATER STORAGE	
ULTIMATE PIT SLOPE	

SECTION ALONG A-B



CONCEPTUAL / FINAL MINE CLOSURE SECTIONS

SECTION- HOR-1 :1000
VER-1 : 500

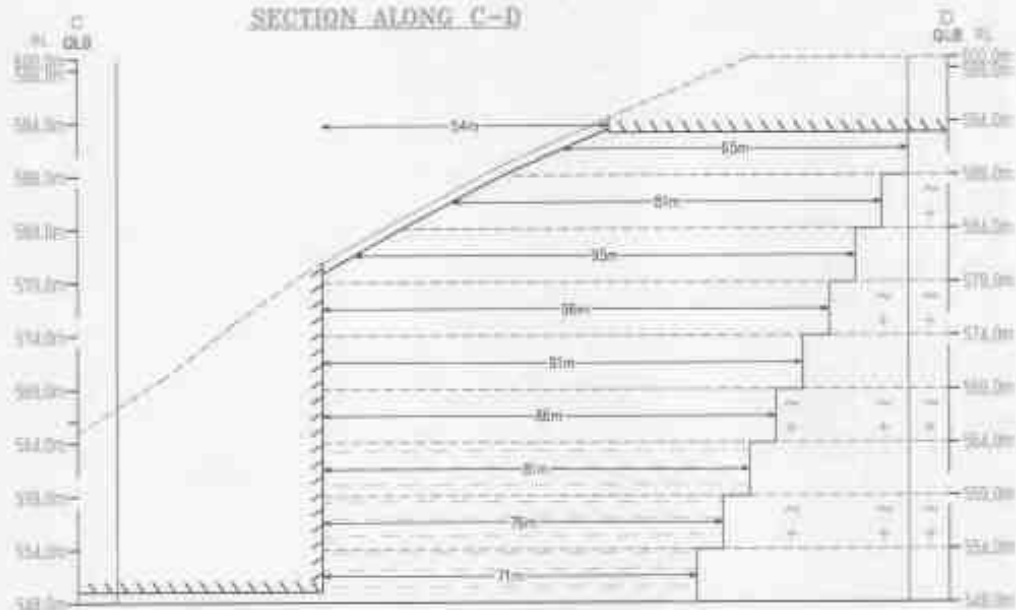
PREPARED BY:

I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE.

S. DHANASEKARAM,
QUALIFIED PERSON.



SECTION ALONG C-D



ULTIMATE PIT DIMENSION
= 229.0m(L) X 144.0m(W) Avg X 45.0m(D)

TOTAL DEPTH = 45m

PLATE NO: VII-B

DATE OF SURVEY: 16-10-2023

APPLICANT ADDRESS:
M/S. A.M.QUALITY STONE,
S.F.No:87/1B1 & 87/1B2,
AKKALAPURAM,
KOTHAPETTA VILLAGE,
KRISHNAGIRI TALUK,
KRISHNAGIRI DISTRICT- 635 001.

LOCATION OF QUARRY
EXTENT : 4.74.90 Ha,
S.F.Nos : 87/1B1B & 87/1B2B,
VILLAGE : KOTHAPETTA,
TALUK : KRISHNAGIRI,
DISTRICT : KRISHNAGIRI.

MINEABLE RESERVES							
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in M3	Mineable Reserves in m3 @ 100%	Top Soil in m3
XY-AB	I	109	66	1			7194
	II	5	1	5	25	25	
	III	28	1	5	140	140	
	IV	57	65	5	18525	18525	
	V	87	60	5	26100	26100	
	VI	109	55	5	29975	29975	
	VII	109	50	5	27250	27250	
	VIII	111	45	5	24975	24975	
	IX	106	40	5	21200	21200	
TOTAL					148190	148190	7194
XY-CD	I	28	54	1			1512
	II	95	65	4	24700	24700	
	III	108	81	5	43740	43740	
	IV	103	95	5	48925	48925	
	V	98	96	5	47040	47040	
	VI	93	91	5	42315	42315	
	VII	88	86	5	37840	37840	
	VIII	83	81	5	33615	33615	
	IX	78	76	5	29640	29640	
	X	73	71	5	25915	25915	
TOTAL					333730	333730	1512
GRAND TOTAL					481920	481920	8706

INDEX

- QUARRY LEASE BOUNDARY
- 7.5m SAFETY DISTANCE
- TOP SOIL
- ROUGH STONE
- QUARRY PIT
- PROPOSED WATER STORAGE
- ULTIMATE PIT SLOPE

CONCEPTUAL / FINAL MINE CLOSURE SECTIONS
SECTION- HOR-1 :1000
VER-1 : 500

PREPARED BY:
I DO HEREBY CERTIFY THAT THE (PLAT) HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE.

S. JAGANSEKAR, M.Sc.
QUALIFIED PERSON



TAMIL NADU POLLUTION CONTROL BOARD

Category of the Industry :

RED

CONSENT ORDER NO. 2008132730454 DATED: 20/06/2020.

PROCEEDINGS NO.F.0770HSR/RS/DEE/TNPCB/HSR/W/2020 DATED: 20/06/2020

SUB: Tamil Nadu Pollution Control Board - RENEWAL OF CONSENT – M/s. QAMRUNNISA ROUGH STONE QUARRY , S.F.No. 87/1B1 (Part), 87/1B2 (Part), KOTTAPETA village, Krishnagiri Taluk and Krishnagiri District - Renewal of Consent for the operation of the plant and discharge of sewage and/or trade effluent under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act - 6 of 1974) – Issued- Reg.

REF: 1. CTO's Proc.No. F.0770 HSR/RS/DEE/TNPCB/HSR/W&A/2016, Dated:13.05.2016.

2. Proc. No.F.0770 HSR/RS/DEE/TNPCB/HSR/W&A/2019, Dated: 12.04.2019.

3. Unit's OCMMS application No.32730454 for RCO, Dated: 27.05.2020.

4. IR.No: F.0770 HSR/RS/AE/HSR/2020, Dated: 08.06.2020.

RENEWAL OF CONSENT is hereby granted under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act, 6 of 1974) (hereinafter referred to as "The Act") and the rules and orders made there under to

The Proprietrix
M/s.QAMRUNNISA ROUGH STONE QUARRY,
S.F.No. 87/1B1 (Part), 87/1B2 (Part),
KOTTAPETA village,
K. agiri Taluk,
Krishnagiri District.

Authorising the occupier to make discharge of sewage and /or trade effluent.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This RENEWAL OF CONSENT is valid for the period ending January 04, 2021

**District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR**

SPECIAL CONDITIONS

1. This renewal of consent is valid for operating the facility for the manufacture of products/byproducts (Col. 2) at the rate (Col 3) mentioned below. Any change in the product/byproduct and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl. No.	Description	Quantity	Unit
Product Details			
1.	Rough Stone - Quarrying in an extent of 4.75 Hect at S.F.No.87/1B1(p),87/1B2(p), Kothapetta village for a period of 5 Years.	52620	Cubic Metre / Five years

2. This renewal of consent is valid for operating the facility with the below mentioned outlets for the discharge of sewage/trade effluent. Any change in the outlets and the quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Outlet No.	Description of Outlet	Maximum daily discharge in KLD	Point of disposal
Effluent Type : Sewage			
1.	Sewage	0.25	On industrys own land
Effluent Type : Trade Effluent			

Additional Conditions:

1. The unit shall comply all the conditions prescribed in the Environmental Clearance issued by the SEIAA, TN, Chennai vide Letter No. SEIAA-TN/F.No.3215/EC/1(a)/2645/2015, Dated: 05.01.2016 valid for 5 years.
2. The unit shall comply all the conditions imposed in the Mining Lease Agreement made with the District Administration without any deviations.
3. The unit shall treat and dispose the sewage generated from the unit through Septic Tank and Soak Pit arrangement as reported.
4. The unit shall ensure that no trade effluent is generated at any stage of its manufacturing process.
5. The unit's operation/ activity for the mining shall not disturb the nearby agricultural land if any at any circumstances.
6. The unit shall take necessary precautionary measures to prevent any adverse impact on the nearby habitation.
7. The consent issued is subject to the final outcome of National Green Tribunal (South Zone) in application No. 165/2013.
8. In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification, failing which this order will be withdrawn without any notice and further action will be initiated against the unit as per law.

**District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR**

To
The Proprietrix,
M/s.QAMRUNNISA ROUGH STONE QUARRY,
No.87/1B1 (Part),Kothapetta Village, Krishnagiri Taluk,Krishnagiri District,
Pin: 635001

Copy to:
1.The Commissioner, ERISHNAGIRI-Panchayat Union, Krishnagiri Taluk, Krishnagiri District.
2. Copy submitted to the Member Secretary, Tamil Nadu Pollution Control Board, Chennai for favour of kind information.
3. Copy submitted to the JCEE-Monitoring, Tamil Nadu Pollution Control Board, Vellore for favour of kind information.
4. File

**** This consent order is computer generated by OCMMS of TNPCB and no signature is needed****



TAMIL NADU POLLUTION CONTROL BOARD

Category of the Industry :

RED

CONSENT ORDER NO. 2008232730454 DATED: 20/06/2020.

PROCEEDINGS NO.F.0770HSR/RS/DEE/TNPCB/HSR/A/2020 DATED: 20/06/2020

SUB: Tamil Nadu Pollution Control Board - RENEWAL OF CONSENT -M/s. QAMRUNNISA ROUGH STONE QUARRY , S.F.No. 87/1B1 (Part), 87/1B2 (Part), KOTTAPETA village, Krishnagiri Taluk and Krishnagiri District - Renewal of Consent for the operation of the plant and discharge of emissions under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) -Issued- Reg.

REF: 1. CTO's Proc.No. F.0770 HSR/RS/DEE/TNPCB/HSR/W&A/2016, Dated:13.05.2016.

2. Proc. No.F.0770 HSR/RS/DEE/TNPCB/HSR/W&A/2019, Dated: 12.04.2019.

3. Unit's OCMMS application No.32730454 for RCO, Dated: 27.05.2020.

4. IR.No: F.0770 HSR/RS/AE/HSR/2020, Dated: 08.06.2020.

RENEWAL OF CONSENT is hereby granted under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) (hereinafter referred to as "The Act") and the rules and orders made there under to

The Proprietrix
M/s.QAMRUNNISA ROUGH STONE QUARRY,
S.F.No. 87/1B1 (Part), 87/1B2 (Part),
KOTTAPETA village,
Krishnagiri Taluk,
Krishnagiri District.

Authorizing the occupier to operate the industrial plant in the Air Pollution Control Area as notified by the Government and to make discharge of emission from the stacks/chimneys.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This RENEWAL OF CONSENT is valid for the period ending January 04, 2021

**District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR**

SPECIAL CONDITIONS

1. This renewal of consent is valid for operating the facility for the manufacture of products (Col. 2) at the rate (Col. 3) mentioned below. Any change in the products and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl. No.	Description	Quantity	Unit
Product Details			
1.	Rough Stone - Quarrying in an extent of 4.75 Hect at S.F.No.87/1B1(p),87/1B2(p), Kothapetta village for a period of 5 Years.	52620	Cubic Metre / Five years

2. This renewal of consent is valid for operating the facility with the below mentioned emission/noise sources along with the control measures and/or stack. Any change in the emission source/control measures/change in stack height has to be brought to the notice of the Board and fresh consent/Amendment has to be obtained.

I Point source emission with stack :				
Stack No.	Point Emission Source	Air pollution Control measures	Stack height from Ground Level in m	Gaseous Discharge in Nm ³ /hr
II Fugitive/Noise emission :				
Sl. No.	Fugitive or Noise Emission sources	Type of emission	Control measures	
1.	Vehicle Movement	Fugitive	Water sprinkler system	
2.	Mining Area	Fugitive	Water sprinkler system	

Special Additional Conditions:

The unit shall install retrofit emission control device, with atleast 70% Particulate matter reduction efficiency on all DG sets with rated capacity more than 125 KVA installed within the industrial premises before 30.06.2020 or otherwise the unit should be shifting to gas based generators by employing new gas based generators. The retrofit emission control device should be tested from one of the five laboratories recognised by CPCB.

Additional Conditions:

1. The unit shall comply all the conditions prescribed in the Environmental Clearance issued by the SEIAA, TN, Chennai vide Letter No. SEIAA,TN/F.No.3215/EC/1(a)/2645/2015, Dated: 05.01.2016 valid for 5 years.
2. The unit shall comply all the conditions imposed in the Mining Lease Agreement made with the District Administration without any deviations.
3. The unit shall operate and maintain the APC measures in the form of portable water sprinklers effectively and continuously so as to satisfy the NAAQ / Emission standards prescribed by the Board.
4. The unit shall adhere to the ANL standards as prescribed by the Board.
5. The unit shall continue to develop more green belt around the unit's premises.
6. The unit's operation/ activity for the mining shall not disturb the nearby agricultural land if any at any circumstances.
7. The unit shall take necessary precautionary measures to prevent any adverse impact on the nearby habitation.
8. The consent issued is subject to the final outcome of National Green Tribunal (South Zone) in application No. 165/2013.
9. The unit shall not use 'Use and throwaway plastics' such as plastic sheets used for food wrapping, spreading on dining table etc, plastic plates, plastic coated tea cups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastics flags irrespective of thickness, within the industry premises. Instead unit shall encourage use of eco friendly alternative such as banana leaf, areca nut palm plate, stainless steel, glass, porcelain plates/cups, cloth bag, jute bag etc.,
10. In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification, failing which this order will be withdrawn without any notice and further action will be initiated against the unit as per law.

**District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR**

To
The Proprietrix,
M/s.QAMRUNNISA ROUGH STONE QUARRY,
No.87/1B1 (Part),Kothapetta Village, Krishnagiri Taluk,Krishnagiri District,
Pin: 635001

Copy to:

1. The Commissioner, KRISHNAGIRI-Panchayat Union, Krishnagiri Taluk, Krishnagiri District .
2. Copy submitted to the Member Secretary, Tamil Nadu Pollution Control Board, Chennai for favour of kind information.
3. Copy submitted to the JCFE-Monitoring, Tamil Nadu Pollution Control Board, Vellore for favour of kind information.
4. File

**** This consent order is computer generated by OCMMS of TNPCB and no signature is needed****

HYDROGEOLOGICAL REPORT

Rough Stone Quarry Over an extent of 4.74.90Ha of Patta lands in
S.F.Nos. 87/1B1B & 87/1B2B of Kothapetta Village, Krishnagiri Taluk,
Krishnagiri District, Tamil Nadu State.

11/2/2014

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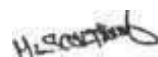
HYDRO - GEOLOGICAL STUDIES AT M/S A.M QUALITY STONE
KOTHAPETTA VILLAGE, KRISHNAGIRI TALUK,
KRISHNAGIRI DISTRICT, TAMIL NADU.

1. INTRODUCTION

Proprietor of M/s A.M. Quality Stone Over an extent of 4.74.90 hectares of Patta land in S.F. Nos. 87/1B1B & 87/1B2B of Kothapetta village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu state on the hydrological regime of the area, the above area has been studied & investigated for finding out Ground water level and aquifer thickness and water quality in and around mine lease area. The electrical resistivity method, TEM study in Rough stone and gravel quarry and genesis rock with determine the shallow and deeper freshwater aquifer in the proposed mining area in M/s. A. M. Quality Stone Kothapetta Village.

1.1. Scope of Study

In the present study, the main aim of the shallow and deeper aquifer investigation through electrical resistivity VES, Method is used to measure the apparent resistivity of the Study area. The present study is estimating the ground water level in Kothapetta village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu village proposed leasehold area and their surrounding area. The study area is mostly covered by Water level, type of sand, type of rock and their basement rock characters. The main aim of the study is to determine the water table and flow movement of this Lease and surrounding area **(Fig.1)**.



1.2. Profiles in the Study Area.

Name of the Lessee	: M/S. A.M. Quality Stone
Survey No	: 87/1B1B & 87/1B2B
Extent	: 4.74.90 hectares.
Village	: Kothapetta village,
Taluka	: Krishnagiri Taluk,
District	: Krishnagiri
State	: Tamil Nadu

2. STUDY AREA DESCRIPTION



Figure.1. Shows proposed mine lease area

The lease applied area is located in **Topo sheet No. 57 - L/2** at Latitude and Longitude between **12° 33' 05.33" N** to **12° 32' 58.37" N** and **78° 12' 53.41" E** to **78° 12' 52.97" E** in northern side at a distance of 4km of Akkalapuram town, along Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu.

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2.1 Topography of the Lease Area and Its Surrounding Environments:

The area is situated almost an elevated terrain sloping towards west covered with Rough Stone which does not sustain any type of vegetation. The altitude of the area is 565m above MSL. No major river is found nearby the lease area. Water table is noticed at a depth of 67m from below the surface in the adjacent open well and bore well. Temperature of the area is reported to be 18 °c to a maximum of 38°c during summer. Rainfall of this area is about 800mm to 900 mm during the monsoons in a year.



Figure 2. Topography and Outcrop in the lease area

3 REGIONAL GEOLOGY OF KRISHNAGIRI DISTRICT

The geological formations of the district belong mainly to Archaean age along with rock of Proterozoic age. The former is represented by Khondalite Group of rocks, Charnockite Group of rocks, Migmatites Complex, Sathyamangalam Group of rocks, while the latter is represented by alkaline rocks. The Khondalite Group includes garnet sillimanite gneiss and quartzite which occur as small patches. The migmatite complex includes garnetiferous quartzo-feldspathic gneiss and hornblends biotite gneiss, the former exposed on the western part of the district. The Sathyamangalam Group includes fuchsite quartzite, sillimanite mica schist and amphibolites. The Bhavani Group in this area includes fissile hornblende-biotite gneiss, granitoid gneiss and pink migmatite. Amphibolites with barbed ferruginous quartzite and associated quartzo-feldspathic rocks (Champion Gneiss) represent the Kolar group and are found west and southwest of Veppanapalli. Following this there are basic intrusions occurring as dykes.

The Charnockite Group occupies a major part of the south-west portion of this district with small bands of garnetiferous quartzo-feldspathic gneiss, Granite gneiss and dolerite dykes. The North-East

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and Northern part of the District mainly consist of granite gneiss with small patches of Pink Migmatite, hornblende-biotite gneiss and dolerite dykes. The Eastern part of the district consists of Epidote-Hornblende Gneiss, Ultra Mafics, Syenite and Carbonatite.

The Alkaline Complex is represented by epidote-hornblende gneiss, ultra mafics, syenite and carbonatite and these are distributed in the eastern part of the district. Innumerable basic dykes and felsites, quartz, barites and pegmatite veins form part of the Alkali Complex.

Krishnagiri District is comprised of Archaean peninsular gneisses such as Charnockites, Hornblende gneisses, Biotite gneisses and migmatites, dolerites and are intruded by younger formations like pegmatite and quartz veins. The peninsular gneisses/ migmatite consists of biotite mica, plagioclase and orthoclase feldspar and quartz and are found as sheet rocks running to several kms from NNE-SSW as a massive rock formations with almost vertical dip.

The order of superposition of geological sequence are given as under, Description:

Stratigraphy Sequences of Krishnagiri District

Age	Formation
Recent	Top Soil Morum (3m Thick)
Archaean	Pegmatite and Quartz/ Veins
Archaean	Dolerite Dyke
Archaean (Kolar Group)	Peninsular Gneisses and Migmatites
Archaean Complex	Biotite Gneiss

4. HYDROGEOLOGY

4.1 Major Geological formations:

Krishnagiri District is underlain by crystalline metamorphic complex in the western parts of district and sedimentary tract in eastern side. An area of 4551 Sq.km is covered by crystalline rocks (63%) and 2671 Sq.km is covered by sediments (37%). The general geological sequence of formation is given below:

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Quaternary	- Laterites, Sands and Clays
Tertiary	- Sandstone, Gravels and Clays
Cretaceous	- Limestone, Calcareous Sandstone and Clay unconformity.
Archaean	- Charnockites, Gneisses, Granites, Dolerites and Pegmatite

The major part of the area is covered by metamorphic crystalline rocks of charnockite, granitic gneiss of Archaean age intruded by dolerite dykes and pegmatite veins. These rocks are highly metamorphosed and have been subjected to very severe folding, crushing and faulting.

- Ground Water occurs under the phreatic condition and wherever there are deep seated fractures, it occurs under semi-confined to confined conditions.

- Occurrence of Ground Water in hard rock depends upon the intensity and depth of weathering, fractures and fissures present in the rocks.

- Granites and gneisses yield moderately compared to the yield in Charnockites.

- Depth of well in hard rock generally ranges between 8 and 15m below ground level.

- Generally yield in open wells ranges from 30 to 250m³ /day and in bore well between 260 and 430 m³ /day. The weathered thickness varies from 2.5 m to 42m in general there are 3 to 5 fracture zones within 100 m and 1 to 4 fracture zones between 100 and 200 m.

The **Cretaceous formation** is represented by Arenaceous Lime stone, Calcareous sand - stone and marl.

The **Tertiary formation** is argillaceous comprising of Silty clay stones, argillaceous Lime stone.

The **Quaternary deposits** represented by the river deposits of Ponnaiyar and Varahanadhi spread over as patches in Villupuram District. The alluvium consists of unconsolidated sands, gravelly sands, clays and clayey sands. The thickness of the sands ranges between 15 and 25 m in the alluvial formation which also form potential aquifers. In some areas, sand stone of tertiary formation are the potential groundwater reservoirs.

4.2 Aquifer Systems:

Occurrence and storage of groundwater depend upon three factors viz., Geology, Topography and rainfall in the form of precipitation. Apart from Geology, wide variation in topographic profile and intensity of rainfall constitutes the prime factors of groundwater recharge. Aquifers are part of the more complex hydro geological system and the behaviour of the entire system cannot be interpreted easily. In hard rock terrain the occurrence of Ground Water is limited to

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top weathered, fissured and fractured zone which extends to maximum 30 m on an average it is about 10-15 m in Krishnagiri District.

In Sedimentary formations, the presence of primary inter granular porosity enhances the transmitting capacity of groundwater where the yield will be appreciable. The sedimentary area which occupies the eastern part of the District along the coastal tract is more favourable for groundwater recharge. Ground Water occurs both in semi confined and confined conditions. A brief description of occurrence of groundwater in each formation is furnished below.

4.2.1 Alluvial Formations

In the river alluvium groundwater occurs under water table condition. The maximum thickness is 37 m and the average thickness of the aquifer is approximately 12 m. These formations are porous and permeable which have good water bearing zones.

4.2.2 Tertiary Cuddalore sandstone

Tertiary formations are represented by Cuddalore Sandstone and characterised as fluvial to brackish marine deposits. Predominantly this formation is divided into Lower and Upper Cuddalore formations. In the Upper Cuddalore formations the groundwater occurs in semi confined conditions, whereas in the Lower Cuddalore the groundwater occurs in confined condition with good groundwater potential.

4.2.3 Cretaceous Formations

Groundwater occurring in the lens shape in the sandy clay lenses and fine sand is underlain by white and black clay beds which constitute phreatic aquifer depth which ranges 10m to 15m below ground level. Phreatic aquifer in Limestone is potential due to the presence of Oolitic Limestone.

4.2.4 Hard Rock Formations

Groundwater occurs under water table conditions but the intensity of weathering, joint, fracture and its development is much less in other type of rocks when compared to gneissic formation. The groundwater potential is low, when compared with the gneissic formations.

- **Granitic Gneiss**

Groundwater occurs under water table conditions in weathered, jointed and fractural formations. The pore space developed in the weathered mantle acts as shallow granular aquifers and forms the potential water bearing and yielding zones water table is shallow in canal and tank irrigation regions and it is somewhat deeper in other regions.

- **Charnockite**

Groundwater occurs under water table conditions but the intensity of weathering, joint, fracture and its development is much less when compared to gneissic formations. The groundwater potential is low, when compared with the gneissic formations.

5. METHODOLOGY OF STUDY

1. Open well and bore well water level measurement, depth of water level diameter of open well, agriculture land survey.
2. Geophysical survey for deep aquifer in nearby site Rock and soil geology also collected for the aquifer characteristic study
3. Aquifer thickness and quality measurement study in nearby proposed mine site areas of the study area

5.1 Geophysical Investigation

5.1.1 Vertical Electrical resistivity sounding for aquifer study.

The electrical resistivity study is used to determine aquifer and occurred rock in the proposed site. The DDR 3 equipment was used for data collection (**Fig.3**)

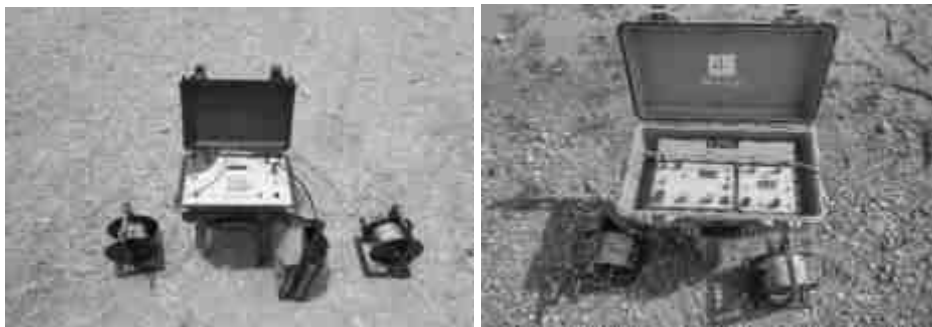


Figure 3. Electrical resistivity survey Instruments.

5.2.2 Basic Principles

The electrical properties of rocks in the upper part of the earth's crust are dependent upon the lithology, porosity, and the degree of pore space saturation and the salinity of the pore water. Saturated rocks have lower resistivity than unsaturated and dry rocks. The higher the porosity of the saturated rock, or the higher the salinity of the saturating fluids, the lower is the resistivity. The presence of clays and conductive minerals also reduces the resistivity of the rock.

The resistivity of earth materials can be studied by measuring the electrical potential distribution produced at the earth's surface by an electric current that is passed through the earth. Current is moved through the subsurface from one current electrode to the other and the potential difference is recorded as the current passes. From this information, resistivity values of various layers are acquired and layer thickness can be identified.

The apparent resistivity values determined are plotted as a log function versus the log of the spacing between the electrodes. These plotted curves identify thickness of layers. If there are multiple layers (more than 2), the acquired data is compared to a master curve to determine layer thickness.

This method is least influenced by lateral in-homogeneities and capable of providing higher depth of investigation.

The resistance R of a certain material is directly proportional to its length L and cross-sectional area A , expressed as:

$$R = R_s * L/A \text{ (in Ohm)}$$

Where R_s is known as the specific resistivity (characteristic of the material and independent of its shape or size)

With Ohm's Law,

$$R = dV/I \text{ (Ohm)}$$

Where dV is the potential difference across the resistor and I is the electric current through the resistor. The specific resistivity may be determined by:

$$R_s = (A/L) * (dV/I) \text{ (in Ohm m)}$$

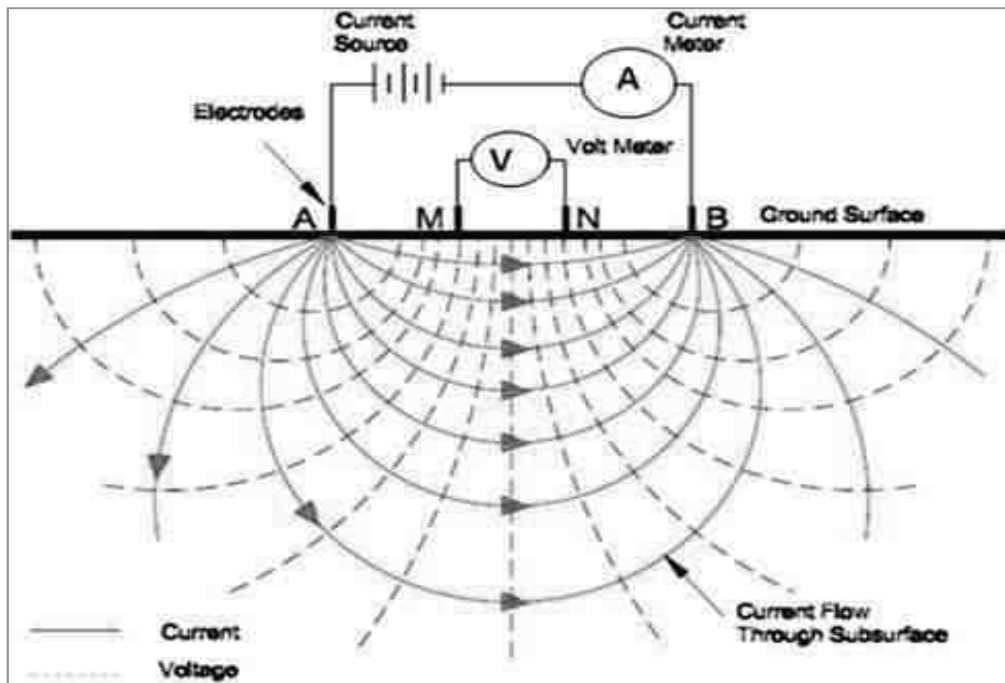


Figure 4. Schematic Diagram of Electrical resistivity principle



Figure 5. Geophysical survey location in the lease area

6. GEOPHYSICAL DATA INTERPRETATION & GRAPH

Table 1 Geophysical data of Station 1

<i>S. No</i>	<i>Ab/2</i>	<i>Mn /2</i>	<i>K</i>	<i>R</i>	<i>Rho</i>
1	2	29.99	9.42	282.51	2
2	2	11.87	25.12	298.17	2
3	2	6.43	47.1	302.85	2
4	2	4.96	75.36	373.79	2
5	5	12.23	23.55	288.02	5
6	5	6.59	62.8	413.85	5
7	5	4.93	117.75	580.51	5
8	5	3.41	274.75	936.90	5
9	5	2.61	494.55	1290.78	5
10	5	2.15	777.15	1670.87	5

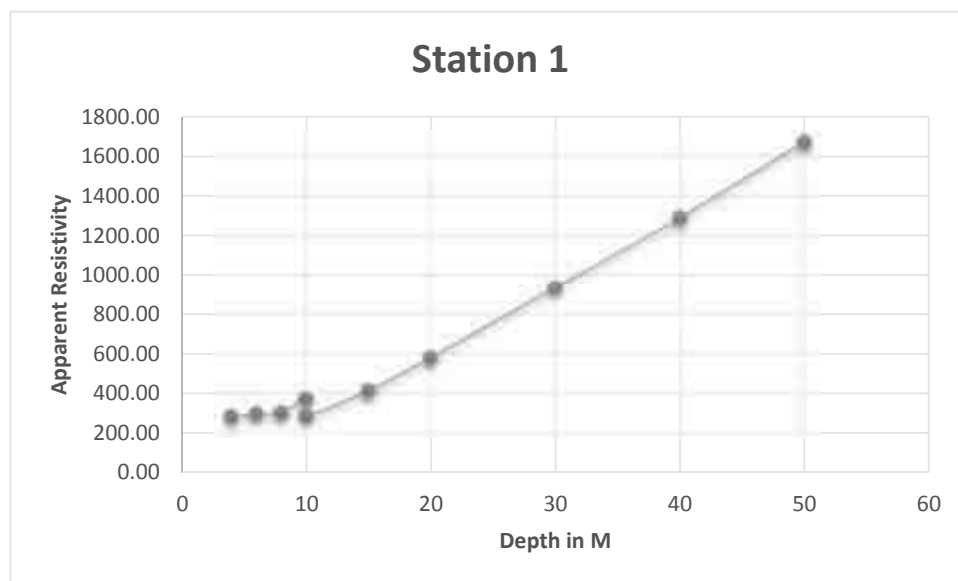


Figure 6 Graphical Representation of Geophysical data Station 1

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Table 2 Geophysical data of Station 2

<i>S. No</i>	<i>Ab/2</i>	<i>Mn /2</i>	<i>K</i>	<i>R</i>	<i>Rho</i>
1	4	2	31.25	9.42	294.38
2	6	2	12.65	25.12	317.77
3	8	2	6.88	47.1	324.05
4	10	2	5.01	75.36	377.55
5	10	5	12.65	23.55	297.91
6	15	5	7.01	62.8	440.23
7	20	5	5.12	117.75	602.88
8	30	5	3.54	274.75	972.62
9	40	5	2.88	494.55	1424.30
10	50	5	2.25	777.15	1748.59

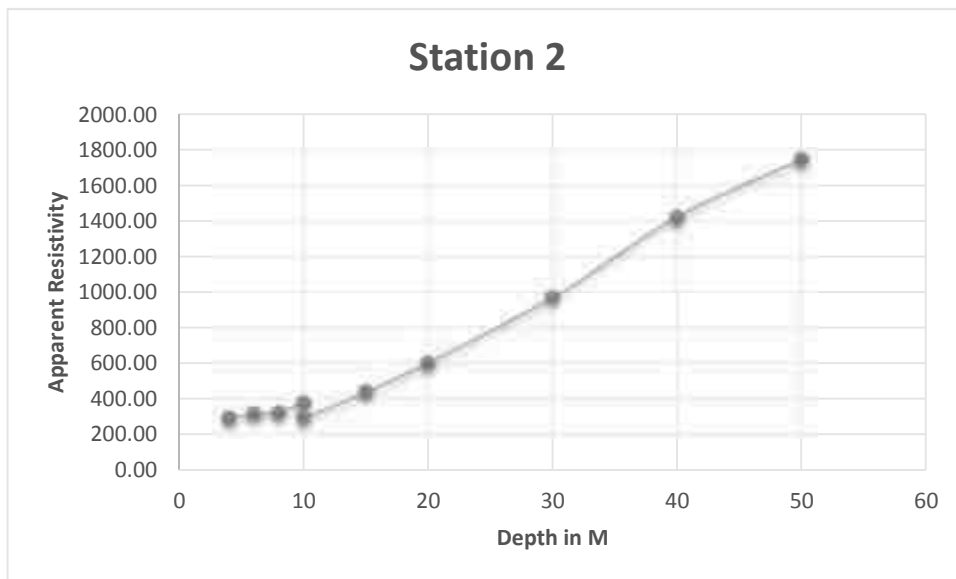


Figure 7 Graphical Representation of Geophysical data Station 2

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Table 3 Geophysical data of Station 3

<i>S. No</i>	<i>Ab/2</i>	<i>Mn/2</i>	<i>K</i>	<i>R</i>	<i>Rho</i>
1	4	2	102.15	9.42	962.253
2	6	2	46.11	25.12	1158.283
3	8	2	23.41	47.1	1102.611
4	10	2	13.65	75.36	1028.664
5	10	5	35.93	23.55	846.1515
6	15	5	16.55	62.8	1039.34
7	20	5	10.84	117.75	1276.41
8	25	5	8.452	188.4	1592.357
9	30	5	6.3	274.75	1730.925
10	40	5	3.07	494.55	1518.269
11	50	5	2.08	777.15	1616.472

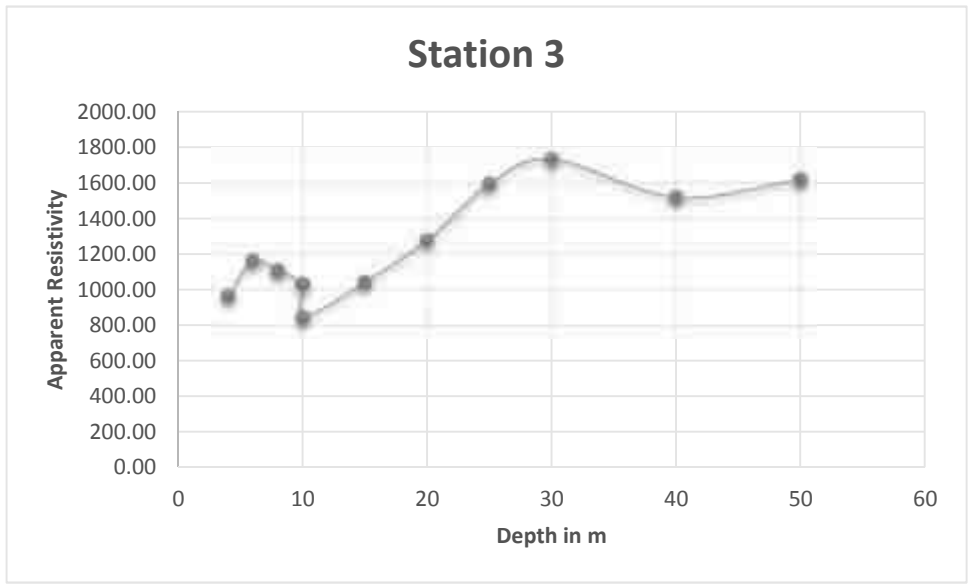


Figure 8 Graphical Representation of Geophysical data Station 3

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Table 4 Geophysical data of Station 4

<i>S. No</i>	<i>Ab/2</i>	<i>Mn/2</i>	<i>K</i>	<i>R</i>	<i>Rho</i>
1	4	2	94.3	9.42	888.31
2	6	2	53.99	25.12	1356.23
3	8	2	29.447	47.1	1386.95
4	10	2	14.33	75.36	1079.91
5	10	5	42.88	23.55	1009.82
6	15	5	20.87	62.8	1310.64
7	20	5	12.99	117.75	1529.57
8	25	5	10.57	188.4	1991.39
9	30	5	8.77	274.75	2409.56
10	40	5	5.01	494.55	2477.70
11	50	5	3.2	777.15	2486.88

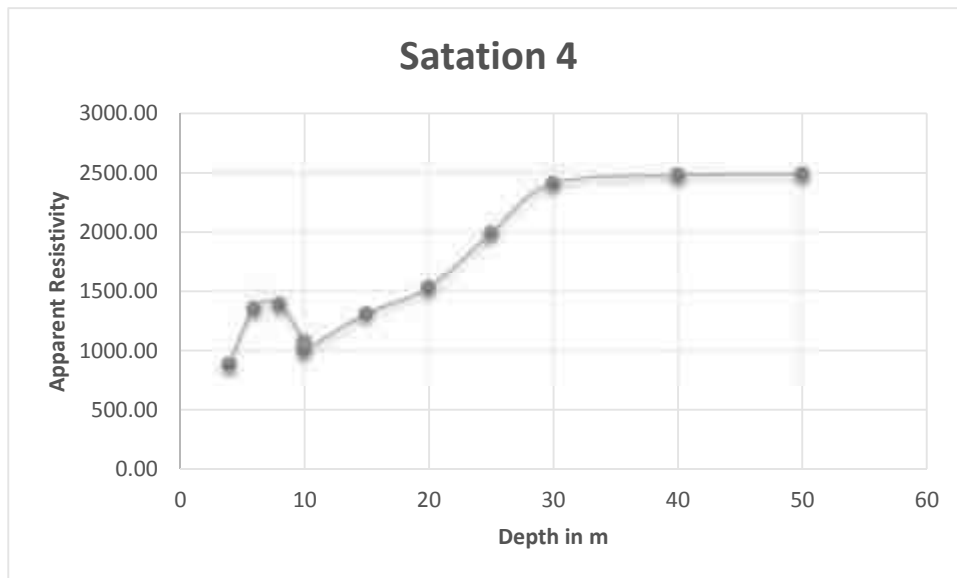


Figure 9 Graphical Representation of Geophysical data Station 4

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Table 5 Geophysical data of Station 5

<i>Sr. No.</i>	<i>AB/2</i>	<i>MN/2</i>	<i>K</i>	<i>R</i>	<i>Rho</i>
1	4	2	97.33	9.42	916.85
2	6	2	52.31	25.12	1314.03
3	8	2	28.47	47.1	1340.94
4	10	2	15.08	75.36	1136.43
5	10	5	40.25	23.55	947.89
6	15	5	19.33	62.8	1213.92
7	20	5	11.78	117.75	1387.10
8	25	5	10.47	188.4	1972.55
9	30	5	8.12	274.75	2230.97
10	40	5	5.12	494.55	2532.10
11	50	5	3.45	777.15	2681.17

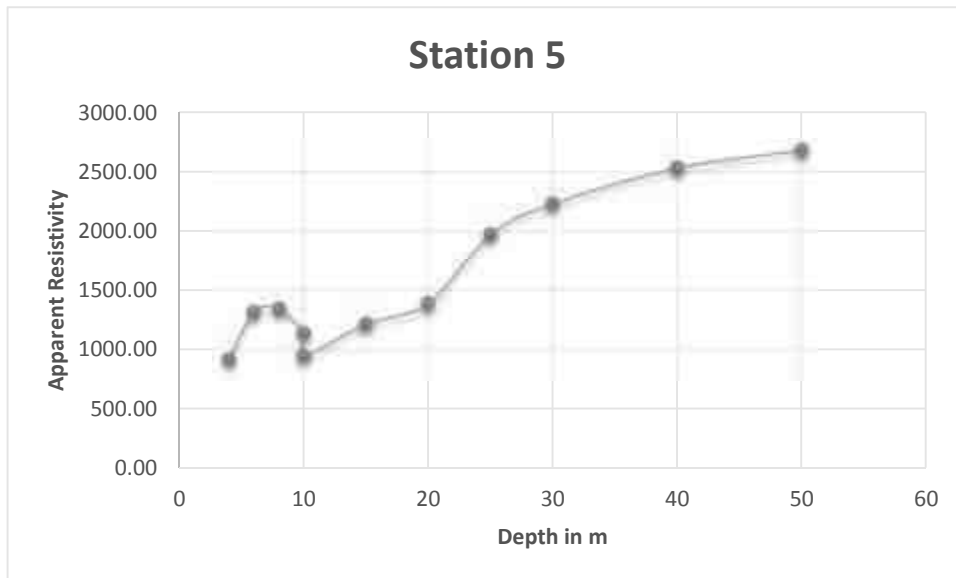


Figure 10 Graphical Representation of Geophysical data Station 5

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Table 6 Geophysical data of Station 6

<i>Sr. No.</i>	<i>AB/2</i>	<i>MN/2</i>	<i>K</i>	<i>R</i>	<i>Rho</i>
1	4	2	98.21	9.42	925.1382
2	6	2	47.99	25.12	1205.509
3	8	2	24.55	47.1	1156.305
4	10	2	14.33	75.36	1079.909
5	10	5	37.88	23.55	892.074
6	15	5	17.88	62.8	1122.864
7	20	5	11.74	117.75	1382.385
8	25	5	9.14	188.4	1721.976
9	30	5	6.4	274.75	1758.4
10	40	5	3.18	494.55	1572.669
11	50	5	2.19	777.15	1701.959

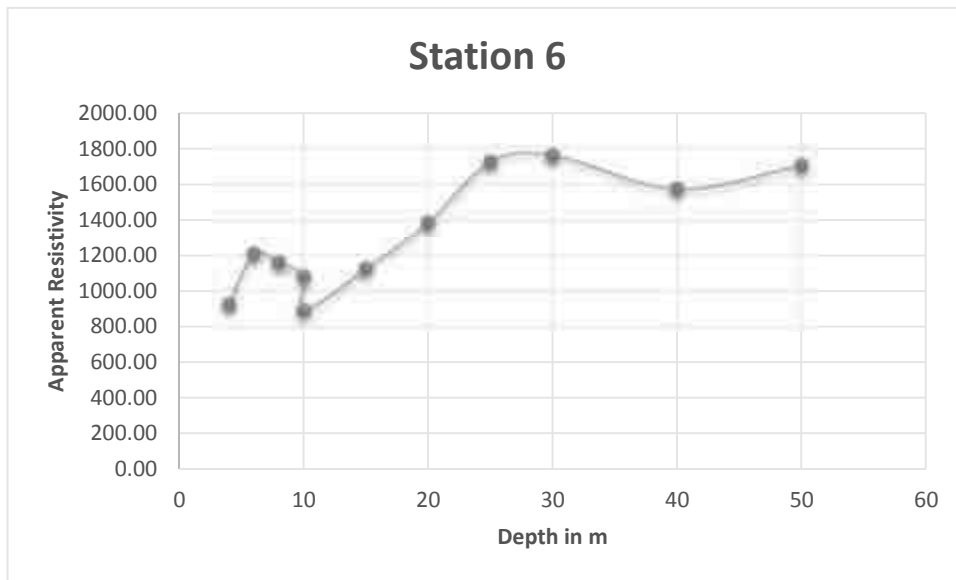


Figure 11 Graphical Representation of Geophysical data Station 6

Table 7 Geophysical data of Station 7

<i>Sr. No.</i>	<i>AB/2</i>	<i>MN/2</i>	<i>K</i>	<i>R</i>	<i>Rho</i>
1	4	2	90.77	9.42	855.0534
2	6	2	43.55	25.12	1093.976
3	8	2	22.17	47.1	1044.207
4	10	2	13.99	75.36	1054.286
5	10	5	34.88	23.55	821.424
6	15	5	15.88	62.8	997.264
7	20	5	10.14	117.75	1193.985
8	25	5	8.77	188.4	1652.268
9	30	5	6.79	274.75	1865.553
10	40	5	3.48	494.55	1721.034
11	50	5	2.47	777.15	1919.561

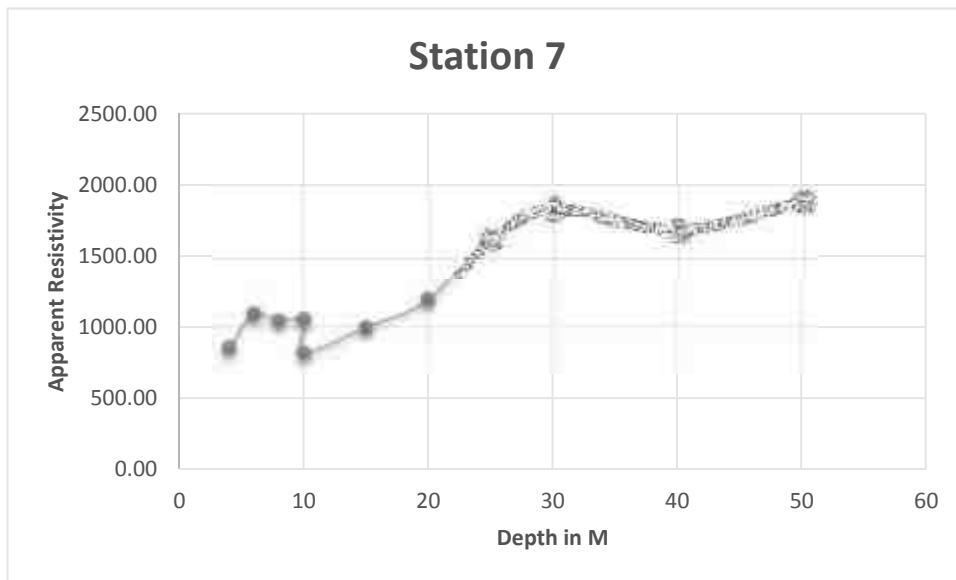


Figure 12 Graphical Representation of Geophysical data Station 7

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Table 8 Geophysical data of Station 8

<i>Sr. No.</i>	<i>AB/2</i>	<i>MN/2</i>	<i>K</i>	<i>R</i>	<i>Rho</i>
1	4	2	80.32	9.42	756.61
2	6	2	40.88	25.12	1026.91
3	8	2	20.47	47.1	964.14
4	10	2	12.88	75.36	970.64
5	10	5	30.77	23.55	724.63
6	15	5	12.66	62.8	795.05
7	20	5	11.99	117.75	1411.82
8	25	5	7.88	188.4	1484.59
9	30	5	6.66	274.75	1829.84
10	40	5	3.81	494.55	1884.24
11	50	5	2.66	777.15	2067.22

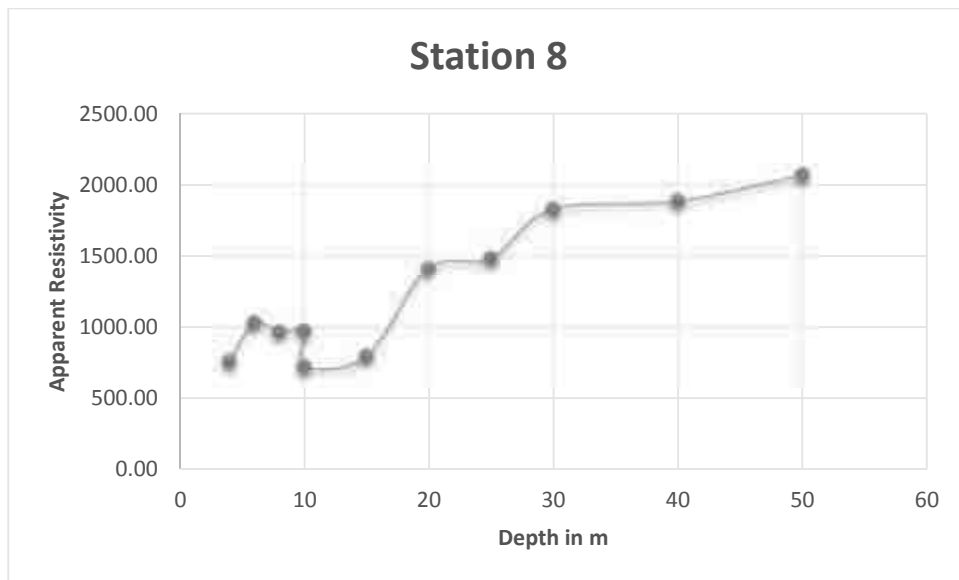


Figure 13 Graphical Representation of Geophysical data Station 8

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Table 9 Geophysical data of Station 9

<i>S. No</i>	<i>Ab/2</i>	<i>Mn/2</i>	<i>K</i>	<i>R</i>	<i>Rho</i>
1	4	2	32.88	9.42	309.73
2	6	2	14.66	25.12	368.26
3	8	2	6.78	47.1	319.34
4	10	2	5.94	75.36	447.64
5	10	5	10.32	23.55	243.04
6	15	5	6.74	62.8	423.27
7	20	5	5.88	117.75	692.37
8	30	5	2.78	274.75	763.81
9	40	5	1.74	494.55	860.52
10	50	5	1.52	777.15	1181.27

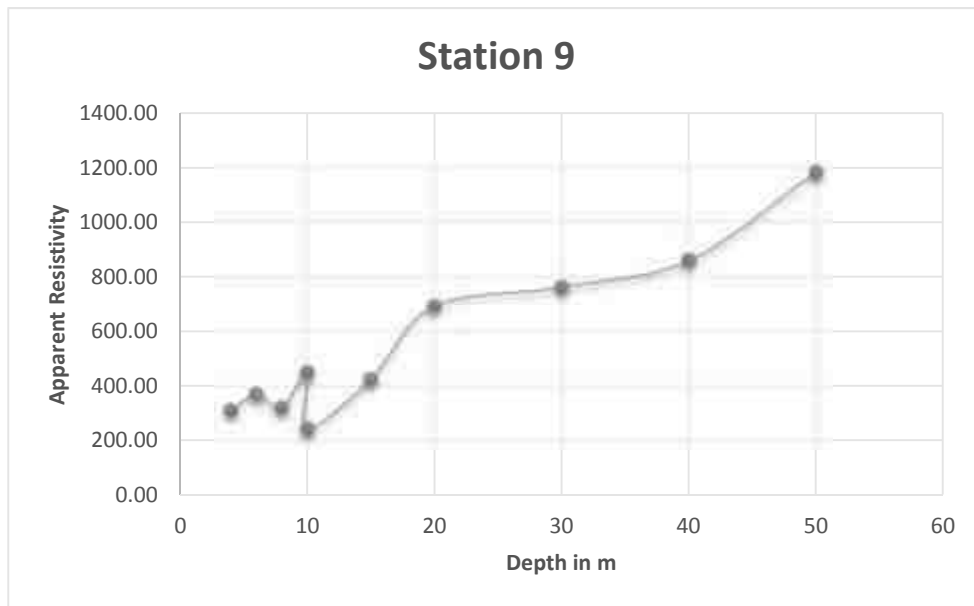


Figure 14 Graphical Representation of Geophysical data Station 9

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Table 10 Geophysical data of Station 10

<i>S.No</i>	<i>Ab/2</i>	<i>Mn/2</i>	<i>K</i>	<i>R</i>	<i>Rho</i>
1	4	2	50.78	9.42	478.35
2	6	2	23.87	25.12	599.61
3	8	2	14.66	47.1	690.49
4	10	2	9.77	75.36	736.27
5	10	5	8.99	23.55	211.71
6	15	5	7.88	62.8	494.86
7	20	5	5.87	117.75	691.19
8	30	5	2.78	274.75	763.81
9	40	5	1.74	494.55	860.52
10	50	5	1.52	777.15	1181.27

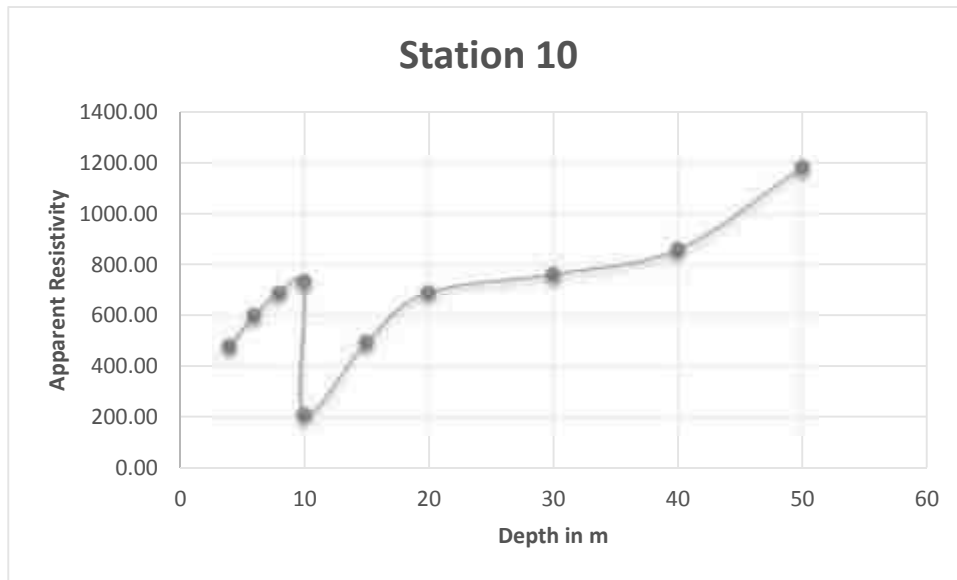


Figure 15 Graphical Representation of Geophysical data Station 10

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7. LITHOLOGY MODELLING USING GEOPHYSICAL DATA

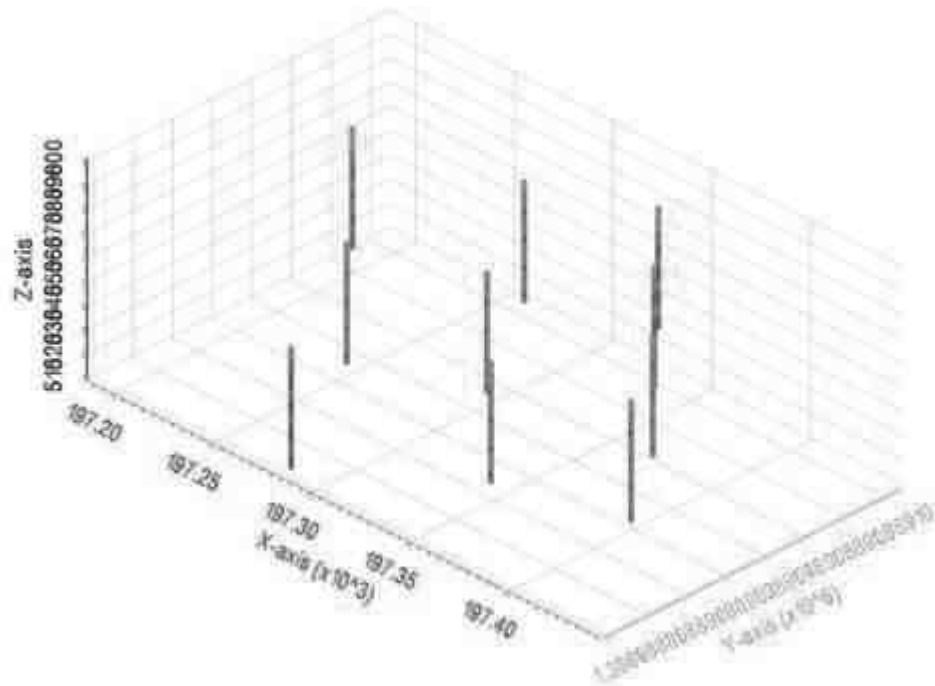


Figure 16 Borehole view of Subsurface Lithology

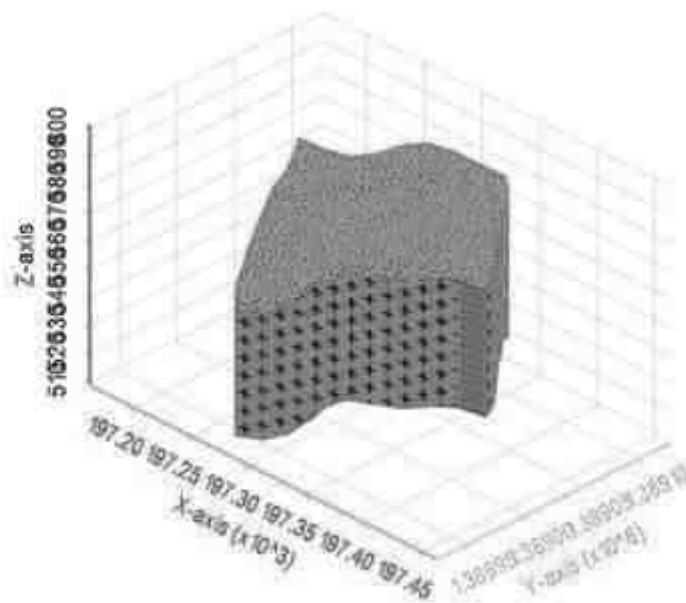
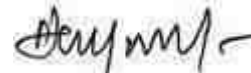


Figure 17 Solid view of Subsurface Lithology

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8. CONCLUSION

- ❖ The mine area is an elevated terrain slopping towards west covered with rough stone. Which does not sustain any type of vegetation. The altitude of the area is 565m above MSL.
- ❖ The geological study of the given area covered by rough stone in the entire area. The discharge of the groundwater controlled by the massive charnockite rock.
- ❖ The study area exhibit vertical dipping formation. So it act as a barrier and restrict the groundwater flow movement.
- ❖ Based on the geophysical investigation, Vertical Electrical Sounding (VES) were conducted to determine the subsurface water table and rock types up to depth of 50 m.
- ❖ The subsurface formation up to this depth can be categorized as follows,
 - ❖ **0m to 2m (Average) - Top Soil**
 - ❖ **3m to 50m (Average) – weathered & Charnockite Formation (Massive Formation)**
- ❖ In this mine lease area, groundwater occurs at deeper level, depending on the intensity of weathering and its development is much less compared to gneissic formation. The mine area such no major intersections of water table are expected up to 50m.
- ❖ The aquifer are found within the weathered / fractured metamorphic terrain. Currently the aquifers are located at **65 to 70 meters** below ground level (BGL). However, considering the approved mining plan depth, which is **45 meters** below ground level. It will not impact the groundwater table.
- ❖ From the above study it can be concluded there will be no adverse effect on the hydrological regime, water drainage, environment, and livelihood. Agricultural activity in the region.



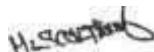
Dr. P. Thangaraju, M.Sc., Ph.D.,

Govt. Approved Hydro Geologist

M/s. Geo Exploration and Mining Solutions,

Regd. Office: No. 17, Advaita Ashram Road,

Alagapuram, Salem – 636 004, Tamil Nadu.





VISHNU EXPLOSIVES



No.235/9, R.G. Nagar Engineer's Colony Extension, Jagir Reddipatty, Salem - 636 302.

Date : 08.12.2023

To
A.M. Quality Stone,
Akkalapuram,
Kothapetta Village,
Krishnagiri Taluk,
Krishnagiri District,
Pin-635 001

Sir,

Sub: Willingness to do Explosives Blasting Works - Reg.

With respect to the above subject, we would like to introduce myself as the Explosives Blasting Contractors, for which our LICENCE NO: E/SC/TN/22/463(E37227) S.F.No.344/3B, Paiyur Village, Krishnagiri Taluk magazine is situated in No.273-A, Keel Paiyur Village, Kaveripattinam, Krishnagiri, Tamilnadu-635 112.


We were engaged in professional blasting contract works with all facilities and License holders to carry out blasting works in specified time and period covered under Explosives Rules, 2008.

We kindly request yourself to engage us to do Explosives Blasting Works in your proposed Rough stone Quarry situated at S.F.No: 87/1B1B & 87/1B2B (Part) in Kothapetta Village, Krishnagiri Taluk, Krishnagiri District over an extent of 4.74.90 hectares.

SERVING BEST AT ALL TIMES

Thanking you.

For VISHNU EXPLOSIVES,


Authorised Signatory 8/12/2023

Enclosure: Magazine License Copy.

अनुमति पत्र फॉर्म ई-3 | LICENCE FORM LE-3

(विस्फोटक नियंत्रण, 2014 के अनुसूची 4 के भाग 1 के अनुसूची 3(क) में (ए) दृष्टि में)
(See article 3(a) to (d) of Part 1 of Schedule IV of Explosives Rules, 2014)

(ए) उपयोग के लिए एक समय पर नहीं 1,2,3,4,5 या नहीं 1 के विस्फोटक या किसी सेटिंगन में नहीं 6 के विस्फोटक रखने के लिए अनुमति
Licence to possess (A) for use explosives of class 1, 2,3,4,5,6 or 7 in a magazine

अनुमति सं. (Licence No.): ENSU/TN/22/463(E37227)

वार्षिक फीस (Annual Fee Rs): 19400/-

1. Licence is hereby granted to

M/s Vishnu Explosives (अधिकारी / Occupier) : Sri G.V.Sai Supramaniam, Vishnu Explosives, 273-A, Kasturbar Village, Kasturbaram Taluk, Town/Village - Kaveripattanam, District-KRISHNAGIRI, State-Tamil Nadu, Pincode - 635112



को अनुमति अनुदान की जाती है।

2. अनुमतिदाता की प्रकृति (Status of licensee: Proprietorship Firm)

3. अनुमति विस्फोटक प्रयोगों के लिए विधिवत् है।
Licence is valid only for the following purpose:

(purpose for use of Detonators, Starry Explosives, Detonating Fuse, Safety Fuse, - के उपयोग के लिए)

4. अनुमति विस्फोटकों के विस्फोटित किस्मों, प्रकार और मात्रा के लिए विधिवत् है।
Licence is valid for the following kinds and quantity of explosives - (अ) (A)

क्र. सं.	नाम और विवरण	ग्रेड और प्रकार	अनुसूची	मात्रा किसी एक समय में
Sr. No.	Name and Description	Class & Division	Sub-Division	Quantity at any one time
1.	Starry Explosives	2.2	0	4200 Kg
2.	Detonating Fuse	6.2	0	20000 Mtrs
3.	Safety Fuse	6.1	0	10000 Mtrs
4.	Detonators	6.3	II	40000 Nos.

(अ) किसी एक कार्टर 200 ग्राम से अधिक वाले विस्फोटक की मात्रा (अनुसूची 3(क) और (ए) के अधीन अनुमति के लिए)
(A) Quantity of explosives to be purchased in a magazine must not be in excess of (a) for license under article 7(b) and (c)

20 times as above.

5. विस्फोटक डिजाइन (ड्राइंग्स) से अनुमति योजना की पुष्टि होती है।
The licensed premises shall conform to the following drawings:

ड्राइंग नं. (Drawing No.): ENSU/TN/22/463(E37227)
दिनांक (Dated): 18/06/1992

6. अनुमति परिसर विस्फोटित होने पर स्थित है। The licensed premises are situated at following address:

Survey No. 344AB, ग्राम (Village): Poyar, Krishnagiri taluk
ज़िला (District): KRISHNAGIRI
दूरभाष (Phone):

राज्य (State):

Tamil Nadu

पुलिस थाना (Police Station): Kaveripattanam
पिनकोड (Pincode): 635112
फैक्स (Fax):

7. अनुमति परिसर में विस्फोटित सुविधाएं उपलब्ध हैं।
The licensed premises consist of following facilities:

main office magazine, jobby & detonator room

8. अनुमति समग्र - समग्र या प्रभावी विस्फोटक अधिनियम (1948) और उसके अधीन विहित विस्फोटक नियंत्रण, 2014 के उपसूची 4(क) और अधिनियम 4(क) और विस्फोटित उपसूची 4 के अधीन रहने हुए अनुदान की जाती है।
The licence is granted subject to the provisions of Explosives Act 1948 as amended from time to time and the Explosives Rules, 2014 issued there under and the conditions, additional conditions and the following Annexure:

1. उपसूची 4(क) में 5 से कम क्षमता ड्राइंग्स (स्थान, अभिलेखांक संकेतों और अन्य विवरण दर्शाते हुए)।
Drawings (showing site, constructional and other details) as stated in serial No. 1 above
2. अनुमति अधिकारी द्वारा स्वीकृत किए गए अनुमति की शर्तों और अधिनियम शर्तों।
Conditions and Additional Conditions of the licence signed by the licensing authority
3. दूर भाष (NO.) Order Form 02-5

9. यह अनुमति (अधिसू. 3) मार्च 1992 तक विधिवत् रहेगी। This licence shall remain valid till the day of March 1992.

यह अनुमति अधिनियम या उसके अधीन विहित नियमों या अनुसूची 4 के भाग 4 के कति विधि 6(क) के अधीन तथा उपसूची 4(क) के अधिनियम द्वारा अनुमति की जाती है।
अधिकार करने या यदि अनुमति परिसर योजना या उसके संलग्न उपसूची में दर्शाते विवरण के अनुकूल नहीं पाए जाने पर निलंबित या प्रतिबंधित की जा सकती है।
This licence is liable to be suspended or revoked for any violation of the Act or Rules framed there under or the conditions of this licence as set forth under Ser VIII, wherever applicable, referred to in Part 4 of Schedule V or if the licensed premises are not found conforming to the description shown in the plans and Annexure attached hereto.

तारीख | The Date - 18/06/1992

संयुक्त मुख्य विस्फोटक नियंत्रक | Joint Chief Controller of Explosives
South Circle, Chennai

Amendments:

- Change in Postal Address dated : 11/01/2017
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 15/01/2018
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 15/03/2018
- Amendment in Drawings/Facilities/Premises dated : 11/10/2021
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 11/10/2021

Transfers:

- Change in Licensee Name/Address/Status dated : 23/06/2011
- Change in Licensee Name/Address/Status dated : 08/10/2021

अधिनियम के पुरस्कार के लिए स्थान
Space for Endorsement of Renewal

नवीकरण की तारीख Date of Renewal	समाप्ति की तारीख Date of Expiry	अनुमति अधिकारी के हस्ताक्षर और स्टॉम्प Signature of Licensing authority and stamp
30/03/2022	31/03/2027	

Controller of Explosives, Vellore
विस्फोटक नियंत्रक, वेल्डूर
Controller of Explosives, Vellore



सरकार भारत | Government of India
 खाद्य और उद्योग मंत्रालय | Ministry of Consumer & Industry
पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पीएसओ) | Petroleum & Explosives Safety Organisation (PESO)
 पूर्व नाम: विस्फोटक विभाग | Formerly - Department of Explosives
 नंबर 3, लोका ईस्ट रोड 308 (No. 3, Vile East Cross Road)
 गांधी नगर, बैंगलूर | Gandhi Nagar, Bangalore 562008
 फोन (Phone)- 2242113 फैक्स (Fax)-
 ई-मेल: Email: dyces@fireandexplosives.gov.in

संख्या (No.): E/SO/TN/22/453(E3/227)

दिनांक (Date): 10/03/2022

सेवा में (To):

M/s Vishva Explosives,
 Vishva Explosives, 273-A, Karpuram Village, Kumbakonam Taluk, Thanjavur - Kumbakonam
 District-KARNATAKA, State Tamil Nadu, Pincode - 611102

विषय:

Survey No.3447B, बंगलूर, Palyur,Krishnagiri-तालुका, जिला KRISHNAGIRI, राज्य Tamil Nadu में विस्फोटक के संचालन में उपयोग के लिए कक्षा 1.1-3 के अंतर्गत 2018 के अंतर्गत 1.1-3 में जारी अनुमति में E/SO/TN/22/453(E3/227)के नवीनीकरण संदर्भ में।

Subject:

Extension for Use of Explosives from magazine situated at Survey No. 3447B, Palyur,Krishnagiri-taluk, Dist. KRISHNAGIRI, Tamil Nadu - Licence No. E/SO/TN/22/453(E3/227) granted in Form 1-1 of Explosives Rules, 2018 - Renewal regarding.

संदर्भ (Ref):

आपका अनुमति विषय पर पर संख्या 34762 दिनांक 02/03/2022 का संदर्भ ग्रहण करें। विस्फोटक नियम, 2018 के अंतर्गत चक्र 1.1-3 में जारी अनुमति दिनांक 21/3/2022 तक नवीनीकृत कर इस पर के साथ भेजी जा रही है।

Reference to your letter No. 34762 dated 02/03/2022, the subject licence duly renewed upto 31/03/2027 and issued in Form 1-1 of Explosives Rules, 2018 is forwarded herewith.

अनुमति के आगामी नवीनीकरण हेतु कृपया निम्नलिखित दस्तावेज दिनांक 31/03/2022 से पहले इस कार्यालय को भेजे जाएं।

For further renewal of licence, please submit the following documents on or in reach this office on or before 31/03/2022.

- प्रत्येक आइटम में विधिवत पूर्ण एवं हस्ताक्षरित आवेदन।
 Applications in Form RE-1 duly filled in and signed.
- एक से पांच वर्ष के अवधिपर शुल्कों का, विस्फोटक नियम, 2018 के तहत ऑनलाइन आवेदन पोर्टल पर उपलब्ध ई-भुगतान सुविधा के माध्यम से माइलेट शुल्क अंतरादायन जमा किया जाता है।
 Licence fees renewable for one to five years, to be submitted online through e-payment facility available on online application portal under the Explosives Rules, 2018.
- अनुमति प्राप्त स्थान के साथ मूल अनुमति।
 Original licence with approved plan.
- कृपया इस संदर्भ में विस्फोटक नियम, 2018 के नियम 113 का भी संदर्भ ग्रहण करें।
 In this connection, please also refer to Rule 113 of Explosives Rules, 2018.
- विस्फोटकों के लिए हेतु आइटम-11 में साराण (इंस्टॉ) अनुमतिकर्ता को दिया जाए और उसी की एक प्रति इस कार्यालय को भेजी जाए (अतिरिक्त नोट्स के लिए लागू नहीं)।
 Indent for purchase of explosive shall be placed in RE-11 with the supplier and copy of the same shall be sent to this office. (Not applicable for fireworks store house).
- कृपया विस्फोटकों की वैसाईक विवरणी हर तिमाही के अंत में आइटम-1 में प्रस्तुत की जाए। विवरणी इस कार्यालय के कार्यालय में आगामी तिमाही के 10 तारीख से पहले पूरा करने चाहिए (अतिरिक्त नोट्स के लिए लागू नहीं)। Please submit quarterly returns of explosives in RE-7 at the end of every quarter on or in reach this office by 10th of the succeeding quarter. (Not applicable for fireworks store house)
- सभी ब्लॉस्टिंग ऑपरेशन एक सक्षम हथकड़ी के तहत जो उपरोक्त नियमों के तहत एक वैध हाई स्पीड क्लॉक प्रमाणपत्र धारक हो। हालांकि, क्लॉक अधिनियम 1952 के अधीन आने वाले क्लॉक में ब्लॉस्टिंग ऑपरेशन करने वाले क्लॉकर को योग्यता उरी अधिनियम में विहित है।
 All blasting operations shall be carried out by a competent person holding a valid shot firer's permit granted under above rules. However, blasting operations in areas coming under the purview of the Mines Act 1952, the blaster shall have qualifications prescribed in the regulations framed under the said Act.

भवदीय : Yours faithfully

(डा.दशरथ काशी) | Dr. Dhanraj Kashib
 विस्फोटक नियंत्रक | Controller of Explosives

पूर्व विस्फोटक नियंत्रक | Ex-Controller of Explosives

बैंगलूर | Bangalore
 विस्फोटक नियंत्रक, बैंगलूर
 Controller of Explosives, Bangalore

पूर्व विस्फोटक नियंत्रक | Ex-The Controller of Explosives,
 बैंगलूर | Bangalore

प्रतिलिपि भेजिए | Copy Forwarded to:

1. जिला मजिस्ट्रेट (District Magistrate), KRISHNAGIRI (Tamil Nadu), सुचना के लिए | For

(अधिक जानकारी के लिए आवेदन की विधि, शुल्क आदि के लिए हमारी वेबसाइट <http://peso.gov.in> देखें।)
 For more information regarding status, fees and other details please visit our website <http://peso.gov.in>

Note :- This is system generated document does not require physical signature. Applicant may take printout for their records.

Form DE-2
(See rule 113 of the Explosives Rules, 2008)
(Distance Form to be attached to the licence)

Safety distances required to be kept clear around magazine for high explosives or fire works or factory licence number E/SC/TN/22/463(E37227) in form LE-3 granted to M/s Vishnu Explosives, Vishnu Explosives, 273-A, Keelpaiyur Village, Kaveripatinam Taluk, Tamil Nadu-635112.

Type of Structure(s)	Safety distances meters	
	M	UM
Inside Safety Distances(ISD)		
1 Room or Workshop used in Connection with the Magazine	41	
2 Any other Explosives Magazine or store House or Factory of the Applicant		
3 Magazine Office		
Middle Safety Distances(MSD)		
4 Magazine Keeper's or Chowkidar's Dwelling house		
5 Railway including Minerals and Private Railways		
6 Canal (in active use) or other navigable water		
7 Dock or Pier or Jetty		
8 Public Highway or Public Road		180
9 Private Road which is PRINCIPAL means of access to a Temple, Mosque, Church, Gurudwara or other places of worships, Hospital, College, School or Factory.		
10 River Embankment or Sea Embankment or Public Well		
11 Reservoir or Bounded tank/rope way		
12 Windmill or Solar panel for Power Generation		
Outside Safety Distances(OSD)		
13 Dwelling House		
14 Govt. and Public Building		
15 Temple, Mosque, Church or Gurudwara or other Places of Worships		
16 Shops, Market place, Public recreation and Sports Ground, College, School, Hospital, Theater, Cinema or other Building where the public are accustomed to assemble		
17 Factory		
18 Buildings or Works used for the Storage in Bulk of Petroleum, Spirit, gas, or other inflammable or hazardous substances		359
19 Building or Works used for Storage and Manufacture of Explosives or of articles which contain Explosives		
20 Aerodrome		
21 Furnace, Kiln or Chimney		
22 Quarry or mine pit head		
23 Power House or Electric Substation		
24 Wireless Station		
25 Warehouse or other Storage Building		
26 Any other Protected works		
Overhead Electric lines		
27 Electric Power over head Transmission Lines above 440V		90
28 Electric Power over head Transmission Lines upto 440V		15

The Date : 18/06/1999


 For Joint Chief Controller of Explosives
 South Circle, Chennai
 विस्फोटक नियंत्रक, चेन्नई
 Controller of Explosives, Vellore

Amendments :

- Change in Postal Address dated : 11/01/2017
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 15/01/2018
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 15/03/2018
- Amendment in Drawings/Facilities/Premises dated : 11/10/2021
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 11/10/2021

शर्तें VIII (Part VIII)

मैगजीन में वर्ग 1,2,3,4,5,6 और 7 के विस्फोटकों को बिंदी या धरोर हेतु रखने के लिए धारा 7(क) (अनुबंध 3 (ख) से (ग)) में सूचीबद्ध विस्फोटक निबंधक या विस्फोटक निबंधक द्वारा प्रदान किए जाने वाले अनुमति सं. E/SC/TN/22/403(E/7227) की शर्तें विस्तारित हैं ।
The following are the conditions of license number E/SC/TN/22/403(E/7227) as proposed for sale or use, explosives of Class 1,2,3, 4, 5, 6 and 7 in a magazine in Form L(E)-7 (Articles 20) to (6) granted by Chief controller of Explosives or Controller of Explosives.

1. धरिस्स में किसी भी समय विस्फोटकों की मात्रा अनुमानित धरोर क्षमताओं में अधिक नहीं होगी ।
The quantity of explosives on the premises at any one time shall not exceed the insurable capacity.
2. विस्फोटकों के भंडारण के लिए धनुस्कार होने वाले मैगजीन अनुसूची III और अनुमति के अन्वय में विनिर्दिष्ट सुरक्षा दूरी बनाए रखना होगा ।
The magazine and the storage of explosives shall maintain safety distance specified in Schedule III and annexure to the license.
3. मैगजीन का धरोर उन सभी विस्फोटकों से, जो इस अनुमति में विनिर्दिष्ट हैं, रखे जाने के लिए और ऐसे रखे जाने से संबंधित जोखिम या अज्ञान का उपचार के रखे जाने के लिए ही किया जाएगा, अस्वभा नहीं ।
The magazine shall be used only for keeping all explosives specified in this license and all receptacles fit, or tools or implements for work connected with the keeping of such explosives.
4. पैकजों को खोलने का कार्य और विस्फोटकों को तोलने तथा पैक करने का कार्य मैगजीन में नहीं किया जाएगा ।
The opening of packages and the weighing and packing of explosives shall not be carried on in the magazine.
5. टी या डी से अधिक लॉज के विस्फोटकों को, जिन्हें मैगजीन में रखे जाने की अनुमति दी जा सकती है, मैगजीन में लम्बी रखे जाने जब उसमें से धरोरक को, ऐसे धरोरक या सव्जन का बहुत संख्याओं विस्फोटक सव्जन या उल्के सीधे पैरा संघर्षशील स्थान उपलब्ध, चांदनी धुलक कर दिया जाए कि किसी तरह से विस्फोटक से लगने वाली क्षति या होने वाला विस्फोट किसी अन्य प्रयोग के विस्फोटक तक न पहुंच सके : परंतु -
(a) 1 (नाइट्रेट निष्कार, वर्ग 1 (नाइट्रेट धार्मिक) के विस्फोटक को 5 पदार्थ प्रभाग के अंतर्गत होने वाले सुरक्षा पत्रों और वर्ग 4 प्रभाग 2 के अंतर्गत आनेवाले विस्फोटक प्रेरक पत्रों, जिनमें कोई दुर्घटन जोड़ा या इस्तेमाल नहीं है, तक दूराने के साथ बिना किसी संघर्षशील विस्फोटक या सव्जन के रखे जा सकते हैं ।
(b) वर्ग 4 प्रभाग 3 के अंतर्गत आनेवाले विस्फोटक प्रेरक अस्त्र रखे जायेंगे ।
(c) वर्ग 1 के अंतर्गत आने वाले बाई बाइट को अलग रखा जाएगा ।
Two or more description of explosives which may be permitted to be kept in the magazine shall be kept only if they are separated from each other by an intervening partition of such substance or character, or by such intervening space, as will effectually prevent explosion or fire in the one communicating with the other. Provided that-
(a) the various explosives of Class 2 (nitro-minerals), Class 3 (nitro-compounds), safety fuses belonging to Class 6 Division 1 and detonating fuses belonging to Class 6 Division 2 do not contain any oxidized iron or steel, may be kept with each other without any intervening partition or space ;
(b) Detonator belonging to Class 9 Division 3 shall be kept separately.
(c) Gun powder belonging to Class 1 shall be kept separately.
6. वर्ग 3 (नाइट्रेट धार्मिक) के विस्फोटकों को, उनके विनिर्माण की तारीख से एक वर्ष बीत जाने के पश्चात सिवाय अनुमति प्राप्तिकारी की विशेष संपूर्ण के मैगजीन में नहीं रखे जाएगा ।
Explosives of Class 3 (nitro compound) shall not be kept in the magazine after the expiration of one year from the date of their manufacture except with the special sanction of licensing authority.
7. वर्ग 3 (नाइट्रेट धार्मिक) के विस्फोटकों को, उनके विनिर्माण की तारीख से एक वर्ष बीत जाने के पश्चात मैगजीन में तभी रखा जाएगा जब कि किसी विस्फोटक निबंधक ने इसके लिए विशेष संपूर्ण दे दी हो ।
(i) जब ऐसा संपूर्ण दे दी गई हो तो विशेष विधिगत नए किसी विस्फोटक निबंधक से पैरा विधिगत प्रमाणपत्र अधिष्ठात कर लिया जाए जिसमें टी नई संपूर्ण के अंतर्गत आनेवाली अवधि दर्शाए की गई हो और इसे प्रमाणपत्र के अनुमतिधारी अपने पास रखेय और गंवार की जाने पर प्रस्तुत करेगा ।
(ii) जब कोई विस्फोटक प्रारंभ क्षुद्रता का न वह करने के अन्वय या इस्तेमाल को नाइट्रेट संघर्षशील या इस नाइट्रेट धार्मिक के निकल जाने के बिना बाहर होने के कारण मैगजीन में प्रस्थापित किए जाने के अनुसूची नहीं रह जाता है तो अनुमतिधारी अपने ही स्वयं पर ऐसे विस्फोटक के निपटारे के लिए पैरा विदेशों का अनुमति करेगा जो सूचीबद्ध विस्फोटक निबंधक जारी करें ।
Explosives of Class 3 (nitro compound) shall not be kept in the magazine after the expiration of one year from the date of their manufacture except with the special sanction of the Controller of Explosives.
(i) When such sanction has been given, a written certificate showing the period covered by the sanction shall be obtained from the Controller of Explosives at each inspection, and shall be kept by the licensee and produced on demand.
(ii) When an explosive owing to its being too impure or of standard purity or owing to signs of liquefaction or of caustic nitro-glycerin or liquid nitro-glycerin or liquid nitro compound is no longer fit for storage in the magazine or some other fit licensee shall comply, at his own expense, with such directions as to its disposal as the Chief Controller or Controller of Explosives may issue.
8. मैगजीन के बीलीन क्षय या उपरोध नहीं होनी : हमारा और उसकी निहित का इस प्रकार सविस्तर किया जाएगा कि हमें इस प्रकार प्रार्थित का प्रस्तावित किया जाएगा कि विस्फोटक का किसी जगह या इस्तेमाल के साथ संपर्क टोना जा सके । बीलीन क्षय में लगी बीने, बीलके जोर विधिगत प्रमाणपत्र विदे से सुरक्षा एवं सलाह रखे जायें तथा ऐसे विस्फोटक, जो क्षय से प्रभावित का न में प्रस्थापित हो सकते हैं, इस प्रकार सव्जन सारधानी बांधी जाएगी कि वहां कोई क्षय संदिग्ध न रहे : परंतु किसी जगह या इस्तेमाल के होने होने के विस्फोट सारधानी से संबंधित हुए होने का वह क्षय ऐसे किसी क्षय में बाधोकर नहीं होगा जिसमें वर्ग 4 (पारा बाइट) के प्रयोग के विस्फोटक से जिसमें कोई विस्फोटक रखा गया है ।
The interior of the magazine and the benches, shelves and fillings therein shall be so constructed or so lined or covered as to prevent the exposure of any iron or steel contact with the explosives. Such benches, shelves and fillings shall so far as is reasonably practicable, be kept free from grime and shall otherwise be clean; and in the case of any explosives liable to be dangerously affected by water, due precautions shall be taken to exclude water therefrom.
Provided that in such of the condition as relates to precautions against the exposure of any iron or steel shall not be obligatory in a building in which no explosive other than explosive of the 1st Division fits (Ammonium) Class is kept.
9. लडि लडिध धारक का परीक्षण विस्फोटक निबंधक करता है जो अनुमतिधारी को परीक्षण के लिए विहित लीड का संपादन करेगा यदि परीक्षण अनुमानधारी अधिक होता है जो उसकी ही बीन अनुमतिधारी द्वारा परभावशील बनने परीक्षण के लिए एक एक दी जाती है। जो एक एक कि परीक्षण अधिकारी लडिध धारक को सहाय्यकर, धरिस्स नहीं कर देगा : परंतु किसी एक परीक्षण के लिए एक बीन किसी एक दिन के दौरान किसी धारक के लिए वह सभी परीक्षणों के लिए प्रस्तुत होगा : परंतु वह और कि लडिध को का अधिक लडिध धारक एक ही मैगजीन से संबद्ध है जो ऐसे सभी धारकों के परीक्षण के लिए बीन ऐसे किसी बीन से अधिक नहीं होगी जो किसी एक लडिध धारक के परीक्षण के लिए एक निश्चित में निर्दिष्ट की गई है ।
If the lighting conductor is tested by the Controller of Explosives, the licensee shall pay the fee prescribed for test, in the event of the test proving satisfactory, the same fee shall be payable by the licensee for each subsequent test until the lighting conductor is passed by the testing officer as satisfactory.
Provided that the fee payable for a single test shall be charged, for all tests made on a conductor during any one day.
Provided further that where two or more lighting conductors are attached to one and the same magazine, the fee for the testing of all such conductors shall not exceed the fee prescribed in this condition for testing a single lighting conductor.

- 10. उपरोक्त तथा जो वरिष्ठ कार्यकर्ता होंगे, अनुमति दूरी के प्रयोग तथा तथा लक्ष्यी सेवा या अन्यथा उद्योग को किसी क्षति से बचाने के लिए आवश्यक उपकरणों को प्रयोग में लाने, विद्यमान उपकरणों को बदलने या मरम्मत, किसी विद्यमान हो सकता है या अन्यथा आवश्यक हो, किन्तु इस दूरी के साथ जो आवश्यक, स्थिति या अवस्था में किसी व्यक्ति को कार्य करने की अनुमति नहीं है जिसमें उद्योग करने पर इस दूरी का पट्टा भंग, जो कोई भी इकाई के उपयोग को लागू होता है, उसे किसी स्थान के संबंध में कार्य कर नहीं होगा जिसमें किन कोई विद्यमान नहीं रहा गया है।
 This provision shall be made, by the use of suitable working clothes without pockets, suitable shoes and by searching or otherwise or by such means, for preventing the introduction into danger area of the factory premises of fire, Lanthier powder or any substance or article likely to cause explosion or fire, but this condition shall not prevent the illumination of an artificial light of such construction, position or character as not to cause any danger of fire or explosion.
 Provided that so much of this condition as applies to the exclusion of fire or steel, shall not be obligatory in a building in which no explosive other than an explosive of the 3rd Division of the 1st (Ammonium) Class is kept.
- 11. अनुमतिदारी प्रत्येक आर.ई.-3 और आर.ई.-4 या आर.ई.-5, जैसी स्थिति हो, में सभी विद्यमानों का अभिलेख और सेवा रजिस्टर और विद्यमान नियम, 1918 के अंतर्गत परिष्कृत किसी भी अधिकारी के समक्ष उपलब्ध करना होगा करने की शर्त की जावे पर उक्त नियम और अभिलेख संस्तु करेगा।
 The licensee shall keep records and accounts of all explosives in Forms III-3 and III-4 or III-5, as the case may be, and exhibit the stock books and records to any of the officers authorized under the Explosives Rules, 1918 whenever such officer may call upon him to do so. The stock books or the prescribed proforma shall be kept maintained.
- 12. परिवर्तन में कोई परिवर्तन या लक्ष्यी अनुमति अधिकारी के पूर्वानुमति बिना नहीं की जायेगी और अनुमतिदारी को किसी दूरी का अनुमति नहीं करेगा जो इस विहित अनुमति अधिकारी विनियमित करे।
 No changes or alterations shall be carried out to the premises without prior approval of the licensing authority and the licensee shall comply with any condition that may be specified by the licensing authority in this behalf.
- 13. सैमजों को सफाई पर अच्छी व्यवस्था की गिती में बनाई रखी जायेगी या सफाई हालत में बनाई रखी जायेगी। यदि किसी कारणवश किसी विद्यमान के सफाई के लिए सैमजों अनुमतिदारी को जारी है तो अनुमतिदारी इस बात की सूचना अनुमति अधिकारी को तुरंत देगा।
 Magazine shall at all times be kept in state of good repair (or maintained in good condition). The licensee shall report to licensing authority whenever, if the magazine becomes unfit for storage of any explosives for any reason whatsoever.
 सैमजों का अनुमतिदारी उक्त नियमों के नियम 34 के उप-नियम 2 के अनुसार वार्षिक निरीक्षण संस्तु करेगा।
 The licensee of the magazine shall submit quarterly return as per subrules (1) and (2) of rule 34 of these rules.
- 14. यदि सुरक्षा दूरी का कोई अधिकार होता है तो उसकी सूचना अनुमति अधिकारी को आवश्यक सलाह और कार्यवाही के लिए तुरंत दी जायेगी।
 Any infringement of the safety distance shall be immediately communicated to the licensing authority for necessary advice and action.
- 15. यदि कोई विद्यमान विद्यमान हुआ अथवा अनुमतिदारी जामा जाता है तो उसकी सूचना अनुमति अधिकारी को, सलाह प्राप्त करने के लिए, तुरंत दी जायेगी।
 The licensing authority shall be immediately informed by advice if any explosion is found detonated or unexploded.
- 16. विद्यमानों के पैकेटों के साथ हुए प्रकाश अंतर जायेगी कि क्या से क्या एक व्यक्ति अंतर कि या सभी पैकेटों की शर्तों की जांच करने और प्रत्येक पैकेट की विनियमित विनियमितों को पढ़ने के लिए उनके बीच में होकर आ जा सके।
 The explosive packages shall be stacked in such a way as to allow movement of at least one person to check the condition of all packages stored and to read the manufacturer particulars of each package.
 लक्ष्यी बालकों की श्रुति के लिए प्रत्येक पैकेट पर सूचना दी जाये और किसी भी दूरी में (1) सैमजों में अधिक नहीं होगा।
 The maximum height of the lighting conductors in earth shall be as low as possible and in no case exceeds than 11' when.
- 17. सैमजों के चारों ओर 15 मीटर की दूरी के अंतर्गत कोई दुर्घटना घटने या झट्टी का अत्यंत शक्ति सामग्री नहीं होने दी जायेगी।
 A distance of 15 meters surrounding the magazine or store house shall be kept clear of dead grass or brush or flammable materials.
- 18. विद्यमानों के प्रत्येक पैकेट की, जब उसे सैमजों के भीतर रखा जा रहा हो, तब तक वह लक्ष्यी के लिए परीक्षा की जायेगी।
 Every package of explosive in the time of being made the magazine shall be examined for its sound condition.
- 19. किसी सैमजों सफाई में किसी एक समय में एक व्यक्ति ही अधिकार को नहीं रखने दिया जायेगा।
 Not more than 1 person shall be allowed inside the magazine at any one time.
- 20. विद्यमानों के झट्टी पैकेटों को सफाई के लिए तुरंत दिया जायेगा और अक्षर कर दिया जायेगा।
 Empty packages of the explosives shall be removed at the earliest and destroyed.
- 21. अनुमतिदारी और कार्यवाही को परिवार के भीतर अत्याधिक के दौरान की जाने वाली प्रक्रियाओं में शामिल होना चाहिए।
 The licensee and the employees shall be conversant with procedure to be taken during the emergency within the premises.
- 22. प्रत्येक अनुमति अधिकारी को सभी सुविधाओं समक्ष पर अनुमति परिवार में अक्षर कर ले पहुँचने दिया जायेगा और वह सुनिश्चित करने के लिए कि अभिलेख और इन विद्यमानों के उपयोग और सुरक्षा विनियमितों को अत्यंत अनुमति किया जा रहा है, अधिकारी को प्रत्येक सुविधा प्रदान की जायेगी।
 Full access to the licensed premises shall be given at all reasonable times every inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act and these rules and the safety conditions are duly observed.
- 23. यदि अनुमति अधिकारी या विद्यमान निरीक्षक अनुमति अधिकारी को अनुमति परिवारों या सफाई, दूरी से उपकरण में कोई कोई मरम्मत या परिवर्तन या परिवर्तन करने या विनियमितों को लागू करने का विकल्प रूप में सुनिश्चित कराया है जो परिवार के भीतर या बाहर या स्थिति की सुरक्षा के लिए आवश्यक है, अनुमति अधिकारी विनियमितों को निष्पादित करेगा और विनियमित शर्तों के भीतर अनुमति विद्यमानों को प्रक्रियाओं को देगा।
 If the licensing authority or a Controller of Explosives informs in writing, the holder of the license to require any repairs or to make any additions or alterations to the licensed premises or machinery, work or apparatus or to carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of other persons or officers of the premises or persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.
- 24. अनुमतिदारी सैमजों में रखने और किसी के लिए अधिकृत विद्यमान दूरी में अनिश्चित अनुमति पैकेटों या कंपनी में अधिकृत विद्यमान / सैमजों को प्रकाश नहीं करेगा।
 The licensee shall purchase authorized explosives, fireworks or safety fuse as mentioned in the list authorized explosives from a licensed factory or company for possession and use from the magazine.
- 25. नियम में अधिकृत शक्ति रखे अनुमति करने वाले अधिकारियों को पढ़ाने की विधि और रखने के लिए (क) जो पढ़ने की शर्त में धार सैमजों की दूरी पर है, 125 टी.बी. (ए) या 141 टी.बी. (सी) के परिभाषित होंगे।
 (क) सुरक्षा (अ) दूरी पर धार को रखने वाले अधिकृत पैकेटों के लिए अनुमति अधिकृत सीमा 5 और 15 पर 10 टी.बी. (सी) पी के अनिश्चित होंगे।
 The possession and sale of fire-crackers generating more than sound:
 a) 125 gms (A) or 141 gms (B) at 4 meters distance from the point of burning shall be prohibited.
 b) For individual fire-cracker constituting the series (joined fire-crackers), the above mentioned limit be reduced by 5 kg 10 (C) gms, when N = number of crackers joined together.
- 26. शर्त या विनियमितों को हटाने या नकाराने पैकेटों की कमी या अधिक, अधिकारी के स्थानीय कार्यवाही को विनियमित की जायेगी।
 Accidents by fire or explosion and loss, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.

தமிழ்நாடு வனத்துறை

அனுப்புதல்
செல்வி. க. கார்த்திகேயனி, இ.வ.ப.,
வன உயிரினக்காப்பாளர்,
ஓசூர் வனக்கோட்டம்,
மத்திகிரி, ஓசூர் - 635 110.
தொலைபேசி எண். 04344-296600



ந.க.எண். 6846/2023/எல் நாள்.10.07.2023

ஐயா,

பொருள் : கனிமங்களும் குவாரிகளும் - கிருஷ்ணகிரி மாவட்டம் (ம) வட்டம் - கொத்தபேட்டா கிராமம் பட்டா புல எண்கள். 87/1B1 (பகுதி) மற்றும் 87/1B2 (பகுதி)-ல் 4.75.0 ஹெக்டர் பரப்பளவில் சாதாரண கற்கள் வெட்டியெடுக்க, குவாரி குத்தகை அனுமதி கோரி, M/s. AM Quality stone என்ற நிறுவனத்தாரால்- குவாரி உரிமம் கோரியுள்ள புலத்திற்கு அருகிலுள்ள காப்பு காடுகள், வனவிலங்கு சரணாலயம் மற்றும் யானை வலசை பாதைகள் விவரம் கோருதல் - தொடர்பாக..

- பார்வை : 1. M/s. AM Quality stone, S.F.No.87/1B1, 87/1B2, அக்காலபுரம், கொத்தபேட்டா கிராமம், கிருஷ்ணகிரி நகரம், கிருஷ்ணகிரி வட்டம் (ம) மாவட்டம் என்பவரது மனு நாள்.06.06.2023.
2. மாவட்ட ஆட்சியர், கிருஷ்ணகிரி மாவட்டம், ந.க.எண்.1314/2023/கனிமம் நாள்.15.06.2023
3. வனச்சரக அலுவலர், கிருஷ்ணகிரி. ந. க. எண். 190/2023 நாள்.07.07.2023.

பார்வை 1ல் கண்ட கடிதத்தில் M/s. AM Quality stone, S.F.No.87/1B1, 87/1B2, அக்காலபுரம், கொத்தபேட்டா கிராமம், கிருஷ்ணகிரி நகரம், கிருஷ்ணகிரி வட்டம் (ம) மாவட்டம் என்ற நிறுவனத்தாரால், கிருஷ்ணகிரி மாவட்டம் (ம) வட்டம், கொத்தபேட்டா கிராமம் பட்டா புல எண்கள். 87/1B1 (பகுதி) மற்றும் 87/1B2 (பகுதி)-ல் 4.75.0 ஹெக்டர் பரப்பளவில் சாதாரண கற்கள் வெட்டியெடுக்க, அனுமதி கோரியுள்ள புலத்திற்கு அருகிலுள்ள காப்புக்காடுகள், காட்டுயிரி வடக்கு வனஉயிரின சரணாலயம், யானைகள் வலசை பாதை ஆகியவற்றின் தொலைவு குறித்த அறிக்கை பார்வை 2ல் காணும் மாவட்ட ஆட்சித்தலைவர், கிருஷ்ணகிரி மாவட்டம் அவர்களால் கோரப்பட்டது.

எனவே, மேற்படி புலத்திற்கு அருகிலுள்ள காப்புக்காடுகள், காட்டுயிரி வடக்கு மற்றும் தெற்கு வனஉயிரின சரணாலயம் அமைந்துள்ள விவரம் பின்வருமாறு தெரிவிக்கப்படுகிறது.

1. மேற்படி சாதாரண கற்கள் வெட்டியெடுக்க அனுமதி கோரியுள்ள இடத்தின் GPS அளவுகள் N12.551262, E78.213312 ஆகும்.
2. மேற்படி தொலைவு விவரம் கோரியுள்ள புலமானது பெத்ததாளப்பள்ளி காப்புக்காட்டின் எல்லையிலிருந்து 2.70 கி.மீ தொலைவிலும், காவேரி வடக்கு வனஉயிரின சரணாலய எல்லையிலிருந்து (ஊடேதூர்கம் காப்புக்காடு) 26.50 கி.மீ தொலைவிலும் மற்றும் காவேரி வடக்கு வனஉயிரின சரணாலயத்திற்கான சூழல் உணர்திறன் மண்டலத்தின் எல்லையிலிருந்து (Eco-Sensitive Zone) 25.50 கி.மீ தொலைவிலும் அமைந்துள்ளது.
3. மேலும், மேற்படி தொலைவு விவரம் கோரியுள்ள புலமானது, காவேரி தெற்கு வனஉயிரின சரணாலய எல்லையிலிருந்து (கேசாகுளி காப்புக்காடு- தருமபுரி வனக்கோட்டம்) 40.80 கி.மீ தொலைவிலும் அமைந்துள்ளதனால், சரணாலயம் அறிவிக்கை செய்து, Eco-Sensitive Zone எல்லை நிர்ணயம் செய்யப்படாத நிலையில், நடைமுறையிலுள்ள வழிகாட்டுதல்களின்படி சரணாலய எல்லையிலிருந்து 10 கிலோமீட்டர் சுற்றளவிற்கு Eco-Sensitive Zone-ஆக கருத்தில் கொண்டு நடவடிக்கை மேற்கொள்ளப்பட வேண்டும் என்ற அடிப்படையில், இப்புலமானது காவேரி தெற்கு வனஉயிரின சரணாலயத்திற்கான Eco-Sensitive Zone எல்லைக்குள் வருவதில்லை.

மேற்படி, கிருஷ்ணகிரி மாவட்டம் (ம) வட்டம், கொத்தபேட்டா கிராமம் பட்டா புல எண்கள். 87/1B1 (பகுதி) மற்றும் 87/1B2 (பகுதி)-ல் 4.75.0 ஹெக்டர் பரப்பளவு புலத்திலிருந்து கீழ்க்கண்ட காப்புக்காடுகள் அமைந்துள்ளன.

வ.எண்.	கோட்டம்	சரகம்	காப்புக்காட்டின் பெயர்
1	ஓசூர்	கிருஷ்ணகிரி	பெத்ததாளப்பள்ளி
2	"	"	குந்தாரப்பள்ளி
3	"	"	தொகரப்பள்ளி
4	"	"	தொகரப்பள்ளிவிரிவாக்கம்
5	"	"	புலிகுண்டாவனவட்டாரம் 2
6	"	"	புலிகுண்டாவனவட்டாரம் 1
7	"	"	வரட்டனப்பள்ளி
8	"	"	வரட்டனப்பள்ளிவிரிவாக்கம்
9	"	"	பர்கூர்
10	"	"	நேரலகோட்டா
11	"	"	நந்திபண்டாவிரிவாக்கம்
12	"	"	நந்திபண்டா
13	"	"	கொத்தூர்
14	"	"	பாலேகுளிவனவட்டாரம் 2
15	"	"	செளட்டஹள்ளி
16	"	"	தள்ளிஹள்ளி
17	"	"	தட்டக்கல்
18	"	"	பெண்ணேஸ்வரமடம்
19	"	"	மகாராஜகடைவிரிவாக்கம்
20	"	"	மகாராஜகடை

வ.எண்.	கோட்டம்	சரகம்	காப்புக்காட்டின் பெயர்
21	"	"	நாரலப்பள்ளி
22	"	"	நாரலப்பள்ளிவிரிவாக்கம்
23	"	"	மேடுகம்பள்ளி
24	"	"	வேப்பனப்பள்ளி
25	"	"	வேப்பனப்பள்ளிவிரிவாக்கம்
26	"	"	கங்கமடுவு
27	"	இராயக்கோட்டை	சோக்காடி
28	"	"	மேலுமலை
29	"	"	சூலகுண்டா
30	"	"	சூலகுண்டாவிரிவாக்கம்
31	"	"	சென்னப்பள்ளி
32	"	"	பில்லாரி அக்ரஹாரம்
33	"	"	செங்கோட்சின்னஹள்ளி
34	"	"	இராயக்கோட்டைவனவட்டாரம் 2
35	"	"	இராயக்கோட்டைவனவட்டாரம் 3
36	"	"	இராயக்கோட்டைவனவட்டாரம் 4
37	"	"	இராயக்கோட்டைவனவட்டாரம் 5
38	"	"	சிக்கபூவத்தி
39	"	"	சாமனப்பள்ளி
40	"	"	வெலகலஹள்ளி
41	"	"	சோக்காடி
42	"	"	சொக்கம்பட்டிவனவட்டாரம் 1
43	"	"	சொக்கம்பட்டிவனவட்டாரம் 2 (பகுதி)
44	ஓசூர்	ஓசூர்	சூளகிரி
45	"	"	தேக்காலப்பள்ளி
46	"	"	ளர்ண்டப்பள்ளி
47	"	"	கும்பளம் வனவட்டாரம் 1
48	"	"	சென்னசந்திரம்
49	"	"	கரியானப்பள்ளிவனவட்டாரம் 1
50	"	"	கரியானப்பள்ளிவனவட்டாரம் 2
51	"	"	தீர்த்தம்
52	தருமபுரி	பாலக்கோடு	சொக்கம்பட்டிவனவட்டாரம் 2
53	"	"	கும்மணூர்
54	"	"	தொட்டபடகானப்பள்ளி
55	"	"	எலுமிச்சனஹள்ளி
56	திருப்பத்தூர்	வாணியம்பாடி	கொத்தூர் (பகுதி)
57	திருப்பத்தூர்	வாணியம்பாடி	நந்திபண்டா (பகுதி)
58	ஆந்திரமாநிலம்	குப்பம்	பைப்பாளையம் (நேரலகோட்டாகாப்புக்காட்டை ஒட்டி உள்ளது)

வளண்.	கோட்டம்	சரகம்	காப்புக்காட்டின் பெயர்
59	"	"	நடுமூர் (மகாராஜகடைகாப்புக்காட்டைஒட்டி உள்ளது)

தங்கள் அன்புள்ள,
ஓம்/- க. கார்த்திகேயனி,
வன உயிரினக்காப்பாளர்,
ஓசூர் வனக்கோட்டம்.

நகல் - உறுப்பினர் செயலர், மாநில சுற்றுச்சூழல் வாரியம் - தமிழ்நாடு, 3வது தளம், எண். 1, பனகல் மாளிகை, ஜீனிஸ் சாலை, சைதாபேட்டை, சென்னை அவர்களுக்கு பணிந்து சமர்ப்பிக்கப்படுகிறது. மின் அஞ்சல் : seiaamstn@gmail.com and tamilnadudoe@gmail.com.

நகல் - M/s. AM Quality stone, S.F.No.87/1B1, 87/1B2, அக்காலபுரம், கொத்தபேட்டா கிராமம், கிருஷ்ணகிரி நகரம், கிருஷ்ணகிரி வட்டம் (ம) மாவட்டம்

நகல் - வனச்சரக அலுவலர், கிருஷ்ணகிரி வனச்சரகம்.

//உ.ந.உ.ப//

கண்காணிப்பாளர்

10/07/23



Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment
Authority(SEIAA), Tamil Nadu)

To,

The Managing Partner
MA QUALITY STONE
Kothapetta Krishnagiri -635109

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the SEIAA vide proposal number SIA/TN/MIN/66063/2021 dated 16 Jul 2022. The particulars of the environmental clearance granted to the project are as below.

- | | |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. EC Identification No. | EC22B001TN163426 |
| 2. File No. | 8687 |
| 3. Project Type | New |
| 4. Category | B1 |
| 5. Project/Activity including Schedule No. | 1(a) Mining of minerals |
| 6. Name of Project | M/s. MA Quality Stone - Rough stone quarry S.F. No. 87/1 B2 (P) over an extent of 3.70.0ha in Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu |
| 7. Name of Company/Organization | MA QUALITY STONE |
| 8. Location of Project | Tamil Nadu |
| 9. TOR Date | 01 Mar 2022 |

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 08/11/2022

(e-signed)
Thiru.Deepak S.Bilgi
Member Secretary
SEIAA - (Tamil Nadu)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH.Please quote identification number in all future correspondence.

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THIRU. DEEPAK S. BILGI, I.F.S.
MEMBER SECRETARY

STATE LEVEL ENVIRONMENT IMPACT
ASSESSMENT AUTHORITY-TAMILNADU

3rd Floor, Panagal Maaligai,
No.1, Jeenis Road, Saidapet,
Chennai - 600 015.
Phone No. 044-24359973
Fax No. 044-24359975

ENVIRONMENTAL CLEARANCE

Lr. No.SEIAA-TN/F.No.8687/EC.No:5388/2022 dated:25.10.2022

Sir/Madam,

Sub SEIAA-TN – Proposed Rough Stone quarry lease area over an extent of 3.70.0Ha at S.F. No. 87/1B2(F), Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu by M/s. MA Quality Stone – issue of Environmental Clearance – Regarding.

- Ref:**
1. ToR issued vide Lr No.SEIAA-TN/F.No.8687/SEAC/ToR-1067/2022 Dated:01.03.2022.
 2. Public Hearing conducted on 07.06.2022.
 3. Online Proposal No. SIA/TN/MIN/66063/2021 Dated: 16.07.2022.
 4. Project proponent submitted EIA Report to SEIAA-TN on 18.07.2022.
 5. Minutes of the 315th meeting of SEAC held on 29.09.2022.
 6. Minutes of the 316th meeting of SEAC held on 30.09.2022.
 7. Minutes of the 562nd meeting of SEIAA held on 25.10.2022 & 26.10.2022.

Details of Minor Mineral Activity:-

This has reference to your application third and fourth cited. The proposal is for obtaining Environmental Clearance for mining / quarrying of minor minerals based on the particulars furnished in your application as shown below.

Sl. No.	Details of the proposal	Details furnished
1.	Name of the Owner/Firm	M/s MA Quality Stone 58B, Gandhi Nagar,


MEMBER SECRETARY
SEIAA-TN

		Krishnagiri District-635001.
2.	Type of quarrying (Savudu/Rough Stone/Sand/Granite)	Rough Stone Quarry
3.	S.F No. of the quarry site with area break-up	87/1B2(P)
4.	Village in which situated	Kothapetta
5.	Taluk in which situated	Krishnagiri
6.	District in which situated	Krishnagiri
7.	Extent of quarry (in ha.)	3.70.0Ha
8.	Period of quarrying proposed	5 years
9.	Type of mining	Opencast Semi-Mechanized Mining
10.	Production (Quantity in m ³)	3,66,486 m ³ of Rough Stone
11.	Depth of quarrying	+5m AGL
12.	Latitude & Longitude of all corners of the quarry site	12°33'04.6251"N to 12°32'53.7570"N 78°12'46.0552"E to 78°12'57.5020"E
13.	Top Sheet No.	57-L/02
14.	Man Power requirement per day:	15 Nos.
15.	Precise area communication approved by the Assistant Director (Addl.Charge), Department of Geology and Mining with date	Roc.No.1179/2020/Mines, dated:22.02.2021
16.	Mining Plan approved by the Assistant Director (Addl.Charge), Department of Geology and Mining with date	Re.No.1179/2020/Mines, dated:27.02.2021
17.	Deputy Director mines 500m cluster letter	Roc.No.1179/2020/Mines, dated:10.03.2022
18.	Water requirement: 1. Drinking & domestic purposes (in KLD) 2. Dust suppression (in KLD) 3. Green Belt (in KLD)	3.2 KLD 0.7 KLD 1.5 KLD 1.0 KLD
19.	Power requirement:	


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	a. Domestic Purpose	TNEB
	b. Industrial Purpose	267 Liters of HSD
20.	Depth of water table	70m-75m BGL
21.	Whether any habitation within 300m distance	No
22.	Project Cost (excluding EMP cost)	Rs. 66,40,000/-
23.	EMP cost	Capital cost – Rs. 21,67,000/- Recurring cost – Rs.7,88,000/-
24.	CER cost	Rs. 5,00,000/-
25.	VAO certificate regarding 300m radius cluster	Letter furnished
26.	ToR Details	Lr No.SEIAA-TN/F.No.8687/SEAC/ ToR-1067/2022 Dated:01.03.2022
27.	Public Hearing	07.06.2022
28.	EIA Submission	18.07.2022
29.	Validity: This Environmental Clearance is granted for the restricted production – 3,66,486m³ Rough Stone for the period of 5 Years from the date of execution of the mining lease.	

The Proponent has furnished affidavit in Hundred Rupees stamp paper attested by the Notary stating that

I, **M/s. MA- Quality Stone**, registered office at 58B, Gandhi Nagar, Krishnagiri District- 635001, Tamilnadu State, solemnly declare and sincerely affirm that, I had applied for Prior Environment Clearance to SEIAA- Tamil Nadu for rough stone quarry in Patta land in S.F.No. 87/1B2 (P), over an extent of 3.70.0hectares of Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu State.

I swear to confirm that within 10km radial distance of the quarry site none of the following is situated.

1. There are no protected areas notified under the wild life (Protection) Act, 1972 around 10km radius.
2. No critically polluted areas as notified by the central pollution control board constituted under water (Prevention and Control of Pollution) Act 1974.


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3. No eco-Sensitive areas as notified around 10km radius.
4. The Karnataka interstate boundary is situated about 7.37km away on the Northern side of the proposed site.
5. There is no coastal zone found around 10km radius and this project site doesn't attract CRZ Notification, 2011.
6. I will complete the following Corporate Environment Responsibility (CER) activities before commencement of the quarrying activity.

Panchayat Union Primary School- Kothapetta Village		
S. No	Description	CER Cost in INR
1	Renovation of Existing Class Rooms	2,50,000
2	Plantation in School	50,000
3	Library Books related to Environment	50,000
4	Toilet renovation work	2,00,000
5	Modern Class room	1,50,000
Total		7,00,000/-

7. Details of quarry located within 500m radius from the periphery.

i) Detail of Existing Quarries:

Sl. No	Name of the address of the lease	Village	S.F. No	Extent (Hect.)	GO. No & Date	Lease period
1	M/s. MA Quality, Krishnagiri	Kothapetta	87/1B2 (P)	3.70.0	Roc.No.1179/2020/M dated: 22.02.2021	Instant Proposal
2	Tmt. K.M.Vijaya, Krishnagiri	Kothapetta	78/1B (P)	4.00.00	Roc.No.419/2018/M dated: 30.05.2018	30.05.2018 to 29.05.2023
3	M/s. Devarajaa, Krishnagiri	Kothapetta	78/1A (P), 78/1B (P)	4.00.0	Roc.No.418/2018/M dated: 30.05.2018	31.05.2018 to 30.05.2023

ii) Details of abandoned/ Old Quarries:

Sl. No	Name of the address of the lease	Village	S.F. No	Extent (Hect.)	Lease period	Lease period
1	Tmt. Qummarunnisa, Krishnagiri	Kothapetta	87/1B1 (P), 87/1B2	4.75.0	Roc.No.08/2013/Mines dated: 05.02.2016	02.03.2016 to 01.03.2021

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ii) Details of Proposed Quarries:

Sl. No	Name of the lease	Village	S.F. No	Extent (Hect.)	GO. No & Date	Lease Period
-NIL-						

iii) Details of applied area:

Sl. No	Name of the lease	Village	S.F. No	Extent (Hect.)	GO. No & Date	Lease Period
-NIL-						

8. There will not be hindrance or disturbance to the people living no enrooted / nearby our quarry site while transporting the mineral our material and due to quarrying activities.
9. There is no approved habitation within 300m radius from the periphery of our quarry.
10. I swear that afforestation will be carried out during the course of quarrying operation and maintained.
11. The required insurance will be taken in the name of the laborers working in our quarry site.
12. The existing road from the main road to quarry is in good condition and the same will be maintained and utilized for transportation of rough stone.
13. I will not engage any child labor in our quarry site and we aware that engaging child labor is punishable under the law.
14. All types of safety/ protective equipment will be provided to all the laborers working in our quarry.
15. No permanent structures, temples etc., are located within 500m radius from the periphery of our quarry.

I ensure to do all the social and Environment commitment as mentioned in the Mining plan to the best of our knowledge.

Details of 500M radius Proposed quarry:

The Project Proponent has submitted a copy of the letter obtained from the Deputy Director, Department of Geology & Mining, Krishnagiri District in his letter Roc.No.1179/2020/Mines, dated: 10.03.2022 has stated that the details of other quarries (Proposed / Existing / Abandoned Quarries) within a radius 500m from the boundary of the proposed quarry site as follows:

(i) Details of Existing Quarries:


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Sl.No	Name of the Lessee	Village	S.F.No	Extent in Hect	GO. No & Date	Lease Period
1	Tmt.K.M.Vijaya W/o.Madhiabhagan, No.58-B Gandhi Nagar, Krishnagiri Dt.	Krishnagiri Taluk, Kothapetta Village	78/1B (part)	4.00.0	Roc.No.419/ 2018/M dated: 30.05.2018	30.05.2018 to 29.05.2023
2	M/s. Devarajaa M- Sand, No.58-B, Gandhi Nagar, Krishnagiri Taluk and District 635001	Krishnagiri Taluk, Kothapetta Village	78/1A (part), 78/1B (part)	4.00.0	Roc.No.418/ 2018/M dated: 30.05.2018	31.05.2018 to 30.05.2023
3	Tmt. Sa. Sumitha Shankar, W/o Shankar Raj, 252, Metbanda Village, Venkatapuram Panchayat, Krishnagiri Post Taluk & Dist.	Kothapetta	56/1 (Part-5)	1.20.0	Roc. 49/2016 (Mines-2) Dated 18.08.2016	01.09.2016 to 31.08.2026

(ii) Details of abandoned /Old Quarries :

Sl.No	Name of the Lessee	Village	S.F.No	Extent in Hect	GO. No & Date	Lease Period
1	Tmt.Qummarunnisa, W/o. Abdul Jaffar, No.2, Rahamatulla, St, Krishnagiri Dt.	Krishnagiri Taluk, Kothapetta Village	87/1B1 (part), 87/1B2	4.75.0	Roc.No.08/ 2013/Mines dated: 05.02.2016	02.03.2016 to 01.03.2021
2	Thiru G. Ganesan, Avdhanapatti Village, Agraharam Post, Krishnagiri Taluk	Kothapetta	56/1 (P- D)	2.54.0	Roc.611/200 9 /Mines-2 dated 14.05.2015.	14.05.2015 to 13.05.2020
3	A.Madhesh, S/o Annadurai, D.No. 36/18 Dasaratharamar Kovil St, Pudukuttai, Krishnagiri Town	Kothapetta	56/1 (part C)	3.06.0	Roc. 126/2010 (Mines-2) Dt. 27.10.2009	3.5.2010 to 2.5.2015

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(iii) Details of proposed Quarries.

Sl.No	Name of the Lessee	Village	S.F.No	Extent in Hect	GO. No & Date	Lease Period
1.	M/s. MA Quality Stone, No.58-B, Gandhi Nagar, Krishnagiri Taluk and District 635001	Krishnagiri Taluk, Kothapetta Village	87/1B2 (part)	3.70.0	Roc.No.1179/20 20/M dated: 22.02.2021	Instant Proposal

(iv) Details of applied area.

Sl.No	Name of the Lessee	Village	S.F.No	Extent in Hect	GO. No & Date	Lease Period
Nil						

Appraisal by SEAC:-

Proposed Rough stone quarry lease over an extent of 3.70.0Ha in S.F.Nos.87/1B2(P), Kothapetta Village, Krishnagiri Taluk, Krishnagiri District, Tamil Nadu by M/s.MA Quality Stone – For Environmental Clearance

The project proposal was placed for appraisal in this 316th meeting of SEAC held on 30.9.2022. The details of the project furnished by the proponent are available in the PARIVESH web portal (parivesh.nic.in).

The Committee noted that,

1. The project/activity is covered under category "B1" of Item 1 (a) "Mining of Minerals Projects" of the schedule to the EIA Notification, 2006.
2. ToR with Public Hearing issued vide Lr No.SEIAA-TN/F.No.8687/SEAC/ToR-1067/2022 Dated: 01.03.2022.
3. Public hearing was conducted on 07.06.2022.
4. EIA report was submitted on 18.07.2022.

Based on the presentation and document furnished by the project proponent, SEAC decided to recommend the proposal for the grant of Environmental Clearance for a production quantity of 5,00,977 cu.m of rough stone for an ultimate depth of 50 m below ground level, subject to the standard conditions as per the Annexure of this minutes & normal conditions stipulated by MOEF&CC, in addition to the following specific conditions:


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1. The prior Environmental Clearance granted for this mining project shall be valid for the project life including production value as laid down in the mining plan approved and renewed by competent authority, from time to time, subject to a maximum of thirty years, whichever is earlier vide **MoEF&CC Notification S.O. 1807(E) dated 12.04.2022.**
2. The proponent shall mandatorily appoint the statutory Mines Manager and other statutorily competent persons such as Blaster, Mine Mate, Mine Foreman in relevant to the proposed quarry size as per the provisions of Mines Act 1952 and Metalliferous Mines Regulations, 1961 respectively.
3. The PP shall communicate the 'Notice of Opening' of the quarry to the Director of Mines Safety, Chennai Region before obtaining the CTO from the TNPCB.
4. The proponent shall maintain the 'S3 (or) G2' type of fencing all around the boundary of the proposed working quarry with gates for entry/exit before the commencement of the operation as recommended in the DGMS Circular, 11/1959 and shall furnish the photographs showing the same before obtaining the CTO from TNPCB.
5. Further, the PP shall maintain the garland drain with proper size, gradient and length along the boundary of the pit leaving behind the mandatory safety zone of 7.5 m as it is designed to take care of run-off water (size, gradient and length) before obtaining the CTO from TNPCB.
6. The PP shall maintain a safety zone of 7.5 m invariably along the South side of the proposed quarry adjacent to the neighbouring quarry and it shall not be extracted unless a statutory permission is obtained from the Chief Inspector of Mines (also designated as Director-General of Mines Safety) under the provisions of Regulations 111 (3) of MMR, 1961.
7. The PP shall carry out the shallow depth Jack hammer drilling (of 32-34 mm dia & 1.5 m depth) & NONEL initiation based 'controlled' blasting operation involving muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled within the permissible limits as stipulated by the DGMS as well as no fly rock travel beyond 20 m from the blast site.
8. The PP shall ensure that the blasting operations are carried out by the blaster/Mine Mate/Mine Foreman employed by him as per the provisions of MMR 1961.


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9. The PP shall use the jack hammer drill machine fitted with the dust extractor for the drilling operations such that the fugitive dust is controlled effectively at the source.
10. As it was revealed during the deliberations, the PP is instructed to carry out the scientific studies on design of controlled blasting for reducing the impact of blast-induced ground/air vibrations and fly rock in the proposed quarry, by involving a reputed Research and Academic Institution such as NIRM, IIT (ISM)/Dhanbad, Anna University Chennai-Dept of Mining Engg, NIT Surathkal-Dept of Mining Engg, and any CSIR Laboratories etc shall be carried out before the commencement of mining operations. A copy of such scientific study report shall be submitted to the SEIAA, MoEF, TNPCB, and DMS, Chennai as a part of Environmental Compliance.
11. The Project Proponent (PP) shall submit a 'Slope stability action plan' incorporating the haul road ramp keeping the benches intact for the proposed quarry lease as the depth of the proposed quarry is exceeding 40 m agl after having approved by the concerned AD (Geology & Mines) to the DEE/TNPCB before obtaining CTO.
12. Since few habitations are situated close to the mine lease boundary, the PP shall carry out the scientific studies on impacts of blasting operations on the surroundings such as ground vibration, air-blast and fly rock within one year after the commencement of mining operations, by involving a reputed Research and Academic Institution such as NIRM, IITs, Anna University Chennai-Dept of Mining Engg, NIT Surathkal-Dept of Mining Engg, and any CSIR Laboratories etc. A copy of such scientific study report shall be submitted to the SEIAA, MoEF, TNPCB, AD/Mines-DGM and DMS, Chennai as a part of Environmental Compliance.
13. The PP shall carry out the tree plantation to act as a barrier to reduce noise level and dust pollution along the boundary of the quarrying site considering the wind direction before obtaining the CTO from the TNPCB.
14. The Project Proponent shall ensure that the funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year-wise expenditure should be reported to the MoEF & CC Ministry and its Integrated Regional Office (IRO) located in Chennai.
15. The Project Proponent shall send a copy of the clearance letter marked to concerned Panchayat from whom any suggestion/representation has been received while processing the proposal.


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16. Mitigating measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing a dedicated water sprinkler. Adequate corrective measures shall be undertaken to control dust emissions, which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, etc.
17. The PP shall include the Mine closure activities as an integral part of the whole life-of-mine plan and, also protect the environment and public health & safety by using safe & responsible closure practices. The PP shall carry out the Progressive closure activities from the commencement of mining operation as provided in their EMP and it shall be reviewed by the concerned AD (Mines) annually.
18. As per the MoEF&CC Office Memorandum F.No. 22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall adhere to the EMP as committed.
19. As accepted by the Project proponent the CER cost is Rs. 5 lakhs and the amount shall be spent for providing infrastructure facilities and plantation of trees for panchayat Union Primary School, Kothapetta Village before obtaining CTO from TNPCB.

ANNEXURE - I

1. The proponent shall mandatorily appoint the required number of statutory officials and the competent persons in relevant to the proposed quarry size as per the provisions of Mines Act 1952 and Metalliferous Mines Regulations, 1961.
2. The proponent shall erect fencing all around the boundary of the proposed area with gates for entry/exit before the commencement of the operation and shall furnish the photographs/map showing the same before obtaining the CTO from TNPCB.
3. Perennial maintenance of haulage road/village / Panchayat Road shall be done by the project proponent as required in connection with the concerned Govt. Authority.
4. The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc.. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest


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and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form of Short Term Permit (STP), Query license or any other name.

5. The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.
6. The proponent shall ensure that the slope of dumps is suitably vegetated in scientific manner with the native species to maintain the slope stability, prevent erosion and surface run off. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps.
7. Perennial sprinkling arrangement shall be in place on the haulage road for fugitive dust suppression. Fugitive emission measurements should be carried out during the mining operation at regular intervals and submit the consolidated report to TNPCB once in six months.
8. The Project Proponent shall carry out slope stability study by a reputed academic/research institution such as NIRM, IIT, Anna University for evaluating the safe slope angle if the proposed dump height is more than 30 meters. The slope stability report shall be submitted to concerned Regional office of MoEF&CC, Govt. of India, Chennai as well as SEIAA, Tamilnadu.
9. The Proponent shall ensure that the Noise level is monitored during mining operation at the project site for all the machineries deployed and adequate noise level reduction measures undertaken accordingly. The report on the periodic monitoring shall be submitted to TNPCB once in 6 months.
10. Proper barriers to reduce noise level and dust pollution should be established by providing greenbelt along the boundary of the quarrying site and suitable working methodology to be adopted by considering the wind direction.
11. The purpose of Green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix in consultation with the DFO, State Agriculture University and local school/college authorities.


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The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.

12. Taller/one year old Saplings raised in appropriate size of bags, preferably eco-friendly bags should be planted in proper escapements as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner.
13. **Noise and Vibration Related:** (i) The Proponent shall carry out only the Controlled Blasting operation using NONEL shock tube initiation system during daytime. Usage of other initiation systems such as detonating cord/fuse, safety fuse, ordinary detonators, cord relays, should be avoided in the blasting operation. The mitigation measures for control of ground vibrations and to arrest fly rocks should be implemented meticulously under the supervision of statutory competent persons possessing the I / II Class Mines Manager / Foreman / Blaster certificate issued by the DGMS under MMR 1961, appointed in the quarry. No secondary blasting of boulders shall be carried out in any occasions and only the Rock Breakers (or) other suitable non-explosive techniques shall be adopted if such secondary breakage is required. The Project Proponent shall provide required number of the security sentries for guarding the danger zone of 500 m radius from the site of blasting to ensure that no human/animal is present within this danger zone and also no person is allowed to enter into (or) stay in the danger zone during the blasting. (ii) Appropriate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs/muffs, (iii) Noise levels should be monitored regularly (on weekly basis) near the major sources of noise generation within the core zone.
14. Ground water quality monitoring should be conducted once in every six months and the report should be submitted to TNPCB.
15. The operation of the quarry should not affect the agricultural activities & water bodies near the project site and a 50 m safety distance from water body should be maintained without carrying any activity. The proponent shall take appropriate measures for "Silt Management" and prepare a SOP for periodical de-siltation indicating the possible silt content and size in case of any agricultural land exists around the quarry.


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16. The proponent shall provide sedimentation tank / settling tank with adequate capacity for runoff management.
17. The proponent shall ensure that the transportation of the quarried materials shall not cause any hindrance to the Village people/Existing Village Road and shall take adequate safety precautionary measures while the vehicles are passing through the schools / hospital. The Project Proponent shall ensure that the road may not be damaged due to transportation of the quarried rough stones; and transport of rough stones will be as per IRC Guidelines with respect to complying with traffic congestion and density.
18. To ensure safety measures along the boundary of the quarry site, security guards are to be posted during the entire period of the mining operation.
19. After mining operations are completed, the mine closure activities as indicated in the mine closure plan shall be strictly carried out by the Proponent fulfilling the necessary actions as assured in the Environmental Management Plan.
20. The Project proponent shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition that is fit for the growth of fodder, flora, fauna etc.
21. The Project Proponent shall comply with the provisions of the Mines Act, 1952, MMR 1961 and Mines Rules 1955 for ensuring safety, health and welfare of the people working in the mines and the surrounding habitants.
22. The project proponent shall ensure that the provisions of the MMRD, 1956, the MCDR 2017 and Tamilnadu Minor Mineral Concession Rules 1959 are complied by carrying out the quarrying operations in a skillful, scientific and systematic manner keeping in view proper safety of the labour, structure and the public and public works located in that vicinity of the quarrying area and in a manner to preserve the environment and ecology of the area.
23. The quarrying activity shall be stopped if the entire quantity indicated in the Mining plan is quarried even before the expiry of the quarry lease period and the same shall be informed to the District AD/DD (Geology and Mining) District Environmental Engineer (TNPCB) and the Director of Mines Safety (DMS), Chennai Region by the proponent without fail.
24. The Project Proponent shall abide by the annual production scheduled specified in the approved mining plan and if any deviation is observed, it will render the Project Proponent liable for legal action in accordance with Environment and Mining Laws.



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25. Prior clearance from Forestry & Wild Life including clearance from committee of the National Board for Wildlife as applicable shall be obtained before starting the quarrying operation, if the project site attracts the NBWL clearance, as per the existing law from time to time.
26. All the conditions imposed by the Assistant/Deputy Director, Geology & Mining, concerned District in the mining plan approval letter and the Precise area communication letter issued by concerned District Collector should be strictly followed.
27. The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.
28. The Project proponent shall install a Display Board at the entrance of the mining lease area/abutting the public Road, about the project information as shown in the **Appendix –II** of this minute.

Appendix

List of Native Trees Suggested for Planting

1. *Aegle marmelos* – Vilvam
2. *Adenaantura pavonina* - Manjadi
3. *Albizia lebbek* – Vaagai
4. *Albizia amara* - Usil
5. *Bauhinia purpurza* - Mantharai
6. *Bauhinia racemosa* – Athi
7. *Bauhinia tomentosa* – Iruvathi
8. *Buchanania aillaris* - Kattuma
9. *Borassus flabellifer* - Panai
10. *Butea monosperma* - Murukka maram
11. *Bobac ceiba* – Ilavu, Sevvilavu
12. *Culophyllum inophyllum* - Punnai
13. *Cassia fistula* - Sarakondrai
14. *Cassia roxburghii*- Sengondrai
15. *Chloroxylon sweitenia* - Purasa maram
16. *Cochlospermum religiosum* – Kongu, Manjal Ilavu
17. *Cordia dichotoma* – Mookuchali maram


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18. *Creteva adansonii* – Mavalingum
19. *Dillenia indica* – Uva, Uzha
20. *Dillenia pentagyna* – Siru Uva, Sitruzha
21. *Diospyros ebum* - Karungali
22. *Diospyros chloroxylon* – Vaganai
23. *Ficus amplissima* – Kal Itchi
24. *Hibiscus tiliaceous* – Aatru poovarasu
25. *Hardwickia binata* – Aacha
26. *Holoptelia integrifolia* - Aayili
27. *Lannea coromandelica* - Odhiam
28. *Lagerstroemia speciosa* - Poo Marudhu
29. *Lepisanthus tetraphylla* - Neikottai maram
30. *Limonia acidissima* - Vila maram
31. *Litsea glutinosa* –Pisin pattai
32. *Madhuca longifolia* - Illuppai
33. *Manilkara hexandra* – Ulakkai Paalai
34. *Mimusops elengi* - Magizha maram
35. *Mitragyna parvifolia* - Kadambu
36. *Morinda pubescens* – Nuna
37. *Morinda citrifolia* – Vellai Nuna
38. *Phoenix sylvestre* - Eachai
39. *Pongamia pinnata* – Pungam
40. *Premna mollissima* – Munnai
41. *Premna serratifolia* – Narumunna
42. *Premna tomentosa* - Puranga Naari, Pudanga Naari
43. *Prosopis cinerea* - Vanni maram
44. *Pterocarpus marsupium* - Vengai
45. *Pterospermum canescens* – Vennangu, Tada
46. *Pterospermum xylocarpum* - Polavu
47. *Puthranjiva roxburghii* – Puthranjivi
48. *Salvadora persica* – Uгаа Maram
49. *Sapindus emarginatus* - Manipungan, Soapu kai

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50. Saraca asoca - Asoca
51. Streblus asper - Piraya maram
52. Strychnos nuxvomica - Yetti
53. Strychnos potatorum - Therthang Kottai
54. Syzygium cumini - Naval
55. Terminalia bellerica - Thandri
56. Terminalia arjuna - Ven marudhu
57. Toona ciliate - Sandhana vembu
58. Thespesia populnea - Puvarasu
59. Walsura trifoliata - valsura
60. Wrightia tinctoria - Veppalai

**Appendix-II
Display Board**

(Size 6' x5' with Blue Background and White Letters)

-----சுரங்கம்

சுரங்கங்களில் சுவாரி செயல்பாடுகளுக்கான சுற்றுச்சூழல் அனுமதி கீழ்க்கண்ட நிபந்தனைகளுக்கு உட்பட்டு வழங்கப்பட்டுள்ளது SEIAA/_____, தேதியே உட்பட்டு சுற்றுச்சூழல் அனுமதி _____ தேதி வரை செல்லத்தக்கதாக உள்ளது

பசுமை பகுதி வளர்ச்சி மேம்பாட்டுக்கான சுரங்கத் திட்டம்	சுவாரியின் எல்லைவையச் சுற்றி சேலி அமைக்க வேண்டும் சுரங்கப்பணத்தின் ஆழம் தளமட்டத்திலிருந்து _____ மீட்டர்க்கு கிடைக்க வேண்டும். சுற்றுநிலை மாசு ஏற்படாதவாறு சுரங்க பணிகளை மேற்கொள்ள வேண்டும்.
நுட்பப்பட்டு பராமரிக்கப்பட வேண்டிய மரங்கள் எண்ணிக்கை:	வாகனங்கள் செல்லும் பாதையில் மாசு ஏற்படாத அளவிற்கு தண்ணீரை முறையாக தண்ணீர் வாரிகளின் மூலமாக அடவப்போது தெளிக்க வேண்டும். சூழரச்சல் அளவையும் தூசி மாகபாட்டையும் குறைப்பதற்காக சுவாரியின் எல்லைவைய சுற்றி அடர்த்தியான பசுமை பகுதியை ஏற்படுத்த வேண்டும்.
சுரங்கத்தில் வெடி வைக்கும்போது நடுவடிக்கைகளை உள்விடமாக செயல்படுத்தப்பட வேண்டும்.	நிலஅதிர்வுகள் ஏற்படாதவாறும் மற்றும் கற்கள் பறக்காதவாறும் பாதுகாப்பு நடவடிக்கைகளை உள்விடமாக செயல்படுத்தப்பட வேண்டும்.
சுரங்கத்தில் இருந்து ஏற்படும் சூழரச்சல் அளவு 85 டி.பி.எஸ் (dBA) அளவிற்கு மேல் ஏற்படாதவாறு தகுந்த கட்டுப்பாடுகளை மேற்கொள்ள வேண்டும்.	சூழரச்சல் அளவு 85 டி.பி.எஸ் (dBA) அளவிற்கு மேல் ஏற்படாதவாறு தகுந்த கட்டுப்பாடுகளை மேற்கொள்ள வேண்டும்.
சுரங்க சட்ட விதிகள் படிவ கீழ் சுரங்கத்தில் உள்ள பணியாளர்களுக்கு தகுந்த பாதுகாப்பு கருவிகள் வழங்குவதோடு கைநாறுமுள்ள கழிப்பறை வசதிகளை செய்ய தர வேண்டும்.	சுரங்க சட்ட விதிகள் படிவ கீழ் சுரங்கத்தில் உள்ள பணியாளர்களுக்கு தகுந்த பாதுகாப்பு கருவிகள் வழங்குவதோடு கைநாறுமுள்ள கழிப்பறை வசதிகளை செய்ய தர வேண்டும்.
சிராமம் அல்லது பஞ்சவயத்து வட்டியாக வாசலங்கள் செய்யும் எல்லைவைய தொடர்ந்து நன்றாக பாதுகாக்க வேண்டும்.	சிராமம் அல்லது பஞ்சவயத்து வட்டியாக வாசலங்கள் செய்யும் எல்லைவைய தொடர்ந்து நன்றாக பாதுகாக்க வேண்டும்.
சுரங்கப்பணிகளால் அருகில் உள்ள விவசாயப் பணிகள் மற்றும் நீர்நிலைகள் பாதிக்கப்படக் கூடாது.	சுரங்கப்பணிகளால் அருகில் உள்ள விவசாயப் பணிகள் மற்றும் நீர்நிலைகள் பாதிக்கப்படக் கூடாது.
நீர்நிலைகள் பாதிக்கப்படாமல் நிறுப்பதை உறுதி செய்யும் வகையில் திட்டத்துடன் தரத்தினை தொடர்ந்து கண்காணிக்க வேண்டும்.	நீர்நிலைகள் பாதிக்கப்படாமல் நிறுப்பதை உறுதி செய்யும் வகையில் திட்டத்துடன் தரத்தினை தொடர்ந்து கண்காணிக்க வேண்டும்.
சுரங்கத்திலிருந்து கனிம பொருட்களை எடுத்துச் செல்வது சிராம மக்களுக்கு எந்தத் சிரமத்தினையும் ஏற்படுத்தாதவாறு பாதுகாப்போடும் (மற்றும் சுற்றுச்சூழல் பாதிக்கவாத வண்ணம் வாகனங்களை சூயக்க வேண்டும்.	சுரங்கத்திலிருந்து கனிம பொருட்களை எடுத்துச் செல்வது சிராம மக்களுக்கு எந்தத் சிரமத்தினையும் ஏற்படுத்தாதவாறு பாதுகாப்போடும் (மற்றும் சுற்றுச்சூழல் பாதிக்கவாத வண்ணம் வாகனங்களை சூயக்க வேண்டும்.
சுரங்கப்பணிகள் முடிக்கப்பட்டவுடன் சுரங்க மூடல் திட்டத்தில் உள்ளவாறு சுரங்கத்தினை மூட வேண்டும்.	சுரங்கப்பணிகள் முடிக்கப்பட்டவுடன் சுரங்க மூடல் திட்டத்தில் உள்ளவாறு சுரங்கத்தினை மூட வேண்டும்.
சுரங்க நடவடிக்கைகளை முடித்தபின்னர் சுரங்கப் பகுதி மற்றும் சுரங்க நடவடிக்கைகளால் இடையூறு ஏற்படக்கூடிய வேறு எந்தப் பகுதியையும் மறுகட்டுமானம் செய்ய தரவார்ப்புகள் விலங்குகள் ஆகியவற்றின் வளர்ச்சிக்கு ஏற்ற வகையில் பசுமைப்பகுதியை உருவாக்க வேண்டும்.	சுரங்க நடவடிக்கைகளை முடித்தபின்னர் சுரங்கப் பகுதி மற்றும் சுரங்க நடவடிக்கைகளால் இடையூறு ஏற்படக்கூடிய வேறு எந்தப் பகுதியையும் மறுகட்டுமானம் செய்ய தரவார்ப்புகள் விலங்குகள் ஆகியவற்றின் வளர்ச்சிக்கு ஏற்ற வகையில் பசுமைப்பகுதியை உருவாக்க வேண்டும்.
முழுமையான நிபந்தனைகளை அறிய பாறியேஷ் (http://pweesh.nic.in) என்சிற இணையதளத்தைப் பார்வையிடவும். மேலும் எந்தவித சுற்றுச்சூழல் சார்ந்த புகர்களுக்கு சென்னையில் உள்ள சுற்றுச்சூழல் மற்றும் வன அமைச்சகத்தின் ஒருங்கிணைந்த வட்டார அலுவலகம்: 044 - 28222325 (அல்லது) தமிழ்நாடு மாநில சட்டப்பாடு வாரியத்தின் மாவட்ட சுற்றுச்சூழல் செயலாளரை அணுகவும்.	முழுமையான நிபந்தனைகளை அறிய பாறியேஷ் (http://pweesh.nic.in) என்சிற இணையதளத்தைப் பார்வையிடவும். மேலும் எந்தவித சுற்றுச்சூழல் சார்ந்த புகர்களுக்கு சென்னையில் உள்ள சுற்றுச்சூழல் மற்றும் வன அமைச்சகத்தின் ஒருங்கிணைந்த வட்டார அலுவலகம்: 044 - 28222325 (அல்லது) தமிழ்நாடு மாநில சட்டப்பாடு வாரியத்தின் மாவட்ட சுற்றுச்சூழல் செயலாளரை அணுகவும்.


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Discussion by SEIAA and the Remarks:-

The proposal was placed before the 562nd Authority meeting held on 25.10.2022 & 26.10.2022. SEAC has furnished its recommendations to the Authority for **granting Environmental Clearance to the Project** subject to the conditions stated therein. After detailed discussion, SEIAA decided to grant Environmental Clearance for the quantity of 366486 m³ of Rough stone with restricted depth upto 45m AGL for a period of 5 years subject to the conditions as recommended by SEAC in addition to the following condition & conditions stated vide Annexure A.

1. The AD/DD, Dept. of Geology & Mining shall ensure operation of the proposed quarry after the submission slope stability study conducted through the reputed research & Academic Institutions such as NIRM, IITs, NITS Anna University, and any CSIR Laboratories etc.
2. The AD/DD, Dept. of Geology & Mining & Director General of Mine safety shall ensure strict compliance and implementation of bench wise recommendations/action plans as recommended in the scientific slope stability study of the reputed research & Academic Institutions as a safety precautionary measure to avoid untoward accidents during mining operation.
3. No trees in the area should be removed and all the trees numbered and protected. In case trees fall within the proposed quarry site the trees may be transplanted in the Greenbelt zone. The proponent shall ensure that the activities in no way result in disturbance to forest and trees in vicinity. The proponent shall ensure that the activity does not disturb the movement of grazing animals and free ranging wildlife. The proponent shall ensure that the activity does not disturb the biodiversity, the flora & fauna in the ecosystem. The proponent shall ensure that the activity does not result in invasion by invasive alien species. The proponent shall ensure that the activities do not disturb the resident and migratory birds. The proponent shall ensure that the activities do not disturb the vegetation and wildlife in the adjoining reserve forests and areas around.
4. The proponent shall ensure that the operations do not result in loss of soil biological properties and nutrients.
5. The activity should not result in CO₂ release and temperature rise and add to micro climate alternations.


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6. The proponent shall ensure that the activity does not disturb the water bodies and natural flow of surface and ground water, nor cause any pollution, to water sources in the area.
7. The proponent shall ensure that the activities undertaken do not result in carbon emission, and temperature rise, in the area.
8. The proponent shall ensure that Monitoring is carried out with reference to the quantum of particulate matter during excavation; blasting; material transport and also from cutting waste dumps and haul roads.
9. The proponent shall ensure that the activities do not disturb the agro biodiversity and agro farms. Actions to be taken to promote agro forestry, mixed plants to support biodiversity conservation in the mine restoration effort.
10. The proponent shall ensure that activity does not deplete the indigenous soil seed bank and disturb the mycorrhizal fungi, soil organism, soil community nor result in eutrophication of soil and water.
11. The activities should not disturb the soil properties and seed and plant growth. Soil amendments as required to be carried out, to improve soil health
12. Bio remediation using microorganisms should be carried out to restore the soil environment to enable carbon sequestration.
13. The proponent shall ensure that all mitigation measures listed in the EIA/EMP are taken to protect the biodiversity and natural resources in the area.
14. The proponent shall ensure that the activities do not impact the water bodies/wells in the neighboring open wells and bore wells. The proponent shall ensure that the activities do not in any way affect the water quantity and quality in the open wells and bore wells in the vicinity or impact the water table and levels. The proponent shall ensure that the activities do not disturb the river flow, nor affect the Odai, Water bodies, Dams in the vicinity.
15. The proponent shall ensure that in the green belt development more indigenous trees species (Appendix as per the SEAC Minutes) to be planted.
16. The proponent shall ensure the area is restored and rehabilitated with native trees as recommended in SEAC Minutes (in Appendix).
17. The proponent shall ensure that the mine restoration is done using mycorrhizal VAM, vermin-composting, Biofertilizers to ensure soil health and biodiversity conservation.
18. The proponent shall ensure that the topsoil is protected and used in planting activities in the area.


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19. The proponent should ensure that there is no disturbance to the agriculture plantations, social forestry plantations, waste lands, forests, sanctuary or national parks. There should be no impact on the land, water, soil and biological environment and other natural resources due to the mining activities.
20. The proponent shall ensure that topsoil to be utilized for site restoration and Green belt alone within the proposed area.
21. The proponent shall ensure that the activities do not impact green lands/grazing fields of all types surrounding the mine lease area which are food source for the grazing cattle.
22. The project proponent shall store/dump the waste generated within the earmarked area of the project site for mine closure as per the approved mining plan.

Directions for Reclamation of mine sites

1. The mining closure plan should strictly adhere to appropriate soil rehabilitation measures to ensure ecological stability of the area. Reclamation/Restoration of the mine site should ensure that the Geotechnical, physical, chemical properties are sustainable that the soil structure composition is buildup, during the process of restoration.
2. The proponent shall ensure that the mine closure plan is followed as per the mining plan and the mine restoration should be done with native species, and site restored to near original status. The proponent shall ensure that the area is ecologically restored to conserve the ecosystems and ensure flow of goods and services.
3. A crucial factor for success of reclamation site is to select sustainable species to enable develop a self-sustaining eco system. Species selected should easily establish, grow rapidly, and possess good crown and preferably be native species. Species to be planted in the boundary of project site should be un palatable for cattle's/ goats and should have proven capacity to add leaf-litter to soil and decompose. The species planted should be adaptable to the site conditions. Should be preferably pioneer species, deciduous in nature to allow maximum leaf-litter, have deep root system, fix atmospheric nitrogen and improve soil productivity. Species selected should have the ability to tolerate altered pit and toxicity of and site. They should be capable of meeting requirement of local people in regard to fuel fodder and should be able to attract bird, bees and butterflies. The species should be planted in mixed association.
4. For mining area reclamation plot culture experiments to be done to identify/ determine suitable species for the site.


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5. Top soil with a mix of beneficial microbes (Bacteria/Fungi) to be used for reclamation of mine spoils. AM Fungi (Arbuscular mycorrhizal fungi), plant growth promoting Rhizo Bacteria and nitrogen fixing bacteria to be utilized.
6. Soil and moisture conservation and water harvesting structures to be used where ever possible for early amelioration and restoration of site.
7. Top soil is most important for successful rehabilitation of mined sites. Topsoil contains majority of seeds and plant propagation, soil microorganism, Organic matter and plant nutrients. Wherever possible the topsoil should be immediately used in the area of the for land form reconstruction, to pre mining conditions.
8. Over burdens may be analyzed and tested for soil characteristics and used in the site for revegetation. Wherever possible seeds, rhizome, bulbs, etc of pioneering spices should be collected, preserved and used in restoring the site.
9. Native grasses seeds may be used as colonizers and soil binders, to prevent erosion and allow diverse self- sustaining plant communities to establish. Grasses may offer superior tolerance to drought, and climatic stresses.
10. Reclamation involves planned topographical reconstruction of site. Care to be taken to minimize erosion and runoff. Topsoils should have necessary physical, chemicals, ecological, properties and therefore should be stored with precautions and utilized for reclamation process. Stocked topsoil should be stabilized using grasses to protect from wind. Seeds of various indigenous and local species may be broad casted after topsoil and treated overburden are spread.
11. Alkaline soils, acidic soils, Saline soils should be suitably treated/amended using green manure, mulches, farmyard manure to increase organic carbon. The efforts should be taken to landscape and use the land post mining. The EMP and mine closure plan should provide adequate budget for reestablishing the site to pre-mining conditions. Effective steps should be taken for utilization of over burden. Mine waste to be used for backfilling, reclamation, restoration, and rehabilitation of the terrain without affecting the drainage and water regimes. The rate of rehabilitation should be similar to rate of mining. The land disturbed should be reshaped for long term use. Mining should be as far as possible be ecofriendly. Integration of rehabilitation strategies with mining plan will enable speedy restoration.
12. Efforts should to taken to aesthetically improve the mine site. Generally there are two approaches to restoration i.e Ecological approach which allows tolerant species to establish


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following succession process allowing pioneer species to establish. The other approach i.e plantation approach is with selected native species are planted. A blend of both methods may be resorted to restore the site by adding soil humas and mycorrhiza.

13. Action taken for restoration of the site should be specifically mentioned in the EC compliances.

Part-A: Conditions to be Complied before commencing mining operations:-


1. The project proponent shall advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing the public that
 - I. The project has been accorded Environmental Clearance.
 - II. Copies of clearance letters are available with the Tamil Nadu Pollution Control Board.
 - III. Environmental Clearance may also be seen on the website of the SEIAA.
 - IV. The advertisement should be made within 7 days from the date of receipt of the clearance letter and a copy of the same shall be forwarded to the SEIAA.
2. Mining activity should be reviewed by the District Collector after three years and decide for further extension.
3. NOC from the Standing committee of the NBWL shall be obtained, if protected areas are located within 10 Km from the proposed project site.
4. The project proponent shall comply the conditions laid down in the Section V, Rule 36 of Tamil Nadu Minor Minerals Concession Rules 1959.
5. A copy of the Environment Clearance letter shall be sent by the proponent to the concerned Panchayat, Town Panchayat / Panchayat union/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the proponent and also kept at the site, for the general public to see.
6. Quarry lease area should be demarcated on the ground with wire fencing to show the boundary of the lease area on all sides with red flags on every pillar shall be erected before commencement of quarrying.
7. The proponent shall ensure that First Aid Box is available at site.


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8. The excavation activity shall not alter the natural drainage pattern of the area.
9. The excavated pit shall be restored by the project proponent for useful purposes.
10. The proponent shall quarry and remove only in the permitted areas as per the approved Mining Plan details.
11. The quarrying operation shall be restricted between 7AM and 5 PM.
12. The proponent shall take necessary measures to ensure that there shall not be any adverse impacts due to quarrying operation on the nearby human habitations, by way of pollution to the environment.
13. A minimum distance of 50mts. from any civil structure shall be kept from the periphery of any excavation area.
14. The mined out pits should be backfilled where warranted and area should be suitably landscaped to prevent environmental degradation. The mine closure plan as furnished in the proposal shall be strictly followed with back filling and tree plantation.
15. Wet drilling method is to be adopted to control dust emissions. Delay detonators and shock tube initiation system for blasting shall be used so as to reduce vibration and dust.
16. Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities.
17. Blasting shall be carried out after announcing to the public adequate through public address system to avoid any accident.
18. A study has to be conducted to assess the optimum blast parameters and blast design to keep the vibration limits less than prescribed levels and only such design and parameters should be implemented while blasting is done. Periodical monitoring of the vibration at specified location to be conducted and records kept for inspection.
19. The Proponent shall take appropriate measures to ensure that the GLC shall comply with the revised NAAQ norms notified by MoEF& CC, GoI on 16.11.2009.
20. The following measures are to be implemented to reduce Air Pollution during transportation of mineral
 - i. Roads shall be graded to mitigate the dust emission.
 - ii. Water shall be sprinkled at regular interval on the main road and other service roads to suppress dust
21. The following measures are to be implemented to reduce Noise Pollution
 - i. Proper and regular maintenance of vehicles and other equipment


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- ii. Limiting time exposure of workers to excessive noise.
 - iii. The workers employed shall be provided with protection equipment and earmuffs etc.
 - iv. Speed of trucks entering or leaving the mine is to be limited to moderate speed of 25 kmph to prevent undue noise from empty trucks.
 - v. All noise generating machinery the compressor, generator to be enclosed in acoustic enclosure so as to reduce noise in working area.
22. Measures should be taken to comply with the provisions laid under Noise Pollution (Regulation and Control) (Amendment) Rules, 2010, dt: 11.01.2010 issued by the MoEF& CC, GoI to control noise to the prescribed levels.
23. Suitable conservation measures to augment groundwater resources in the area shall be planned and implemented in consultation with Regional Director, CGWB. Suitable measures should be taken for rainwater harvesting.
24. Permission from the competent authority should be obtained for drawl of ground water, if any, required for this project.
25. Topsoil, if any, shall be stacked properly with proper slope with adequate measures and should be used for plantation purpose.
26. The following measures are to be adopted to control erosion of dumps:-
- i. Retention/ toe walls shall be provided at the foot of the dumps.
 - ii. Worked out slopes are to be stabilized by planting appropriate shrub/ grass species on the slopes.
27. Waste oils, used oils generated from the EM machines, mining operations, if any, shall be disposed as per the Hazardous& other wastes (Management, and Trans Boundary Movement) Rules, 2016 and its amendments thereof to the recyclers authorized by TNPCB.
28. Concealing the factual data or failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
29. Rain water harvesting to collect and utilize the entire water falling in land area should be provided.
30. Rain water getting accumulated in the quarry floor shall not be discharged directly to the nearby stream or water body. If it is to be let into the nearby water body, it has to be


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discharged into a silt trap on the surface within the lease area and only the overflow after allowing settling of soil be let into the nearby waterways. The silt trap should be of sufficient dimensions to catch all the silt water being pumped out during one season. The silt trap should be cleaned of all the deposited silt at the end of the season and kept ready for taking care of the silt in the next season.

31. The lease holder shall undertake adequate safeguard measures during extraction of material and ensure that due to this activity, the hydro-geological regime of the surrounding area shall not be affected. Regular monitoring of ground water level and quality shall be carried out around the mine lease area during the mining operation. If at any stage, if it is observed that the groundwater table is getting depleted due to the mining activity; necessary corrective measures shall be carried out. District Collector/mining officer shall ensure this.
32. No tree-felling shall be done in the leased area, except only with the permission from competent Authority.
33. To take up environmental monitoring of the proposed quarry site before, during and after the mining activities including vibration study data, water, air & flora/fauna environment, slurry water generated/disposed and method of disposal, involving a reputed academic Institution.
34. It shall be ensured that the total extent of nearby quarries(existing, abandoned and proposed) located within 500 meter radius from the periphery of this quarry is not exceeding 5 hectares within the mining lease period of this application.
35. It shall be ensured that there is no habitation is located within 300 meter radius from the periphery of the quarry site and also ensure that no hindrance will be caused to the people of the habitation located within 300m radius from the periphery of the quarry site.
36. Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF& CC, GOI.
37. Air sampling at intersection point should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF& CC, GOI.
38. Bunds to be provided at the boundary of the project site.
39. The project proponent shall undertake plantation/afforestation work by planting the native species on all side of the lease area at the rate of 400/Ha. Suitable tall tree saplings should be planted on the bunds and other suitable areas in and around the work place.


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40. Floor of excavated pit to be levelled and sides to be sloped with gentle slope (Except for granite quarries) in the mine closure phase.
41. The Project Proponent shall ensure a minimum of 2.5% of the annual turnover will be utilized for the CSR Activity
42. The Project Proponent shall provide solar lighting system to the nearby villages.
43. Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary shall be developed and maintained.
44. Safety equipments to be provided to all the employees.
45. Safety distance of 50m has to be provided in case of railway, reservoir, canal/odai
46. The Assistant/Deputy Director, Department of Geology & mining shall ensure that the proponent has engaged the blaster with valid Blasting license/certificate obtained from the competent authority before execution of mining lease.
47. The proponent shall furnish the Baseline data covering the Air, Water, Noise and land environment quality for the proposed quarry site before execution of mining lease.
48. The proponent shall erect the pillars in accordance with the Rules for depicting GPS details in the earmarked boundary of the quarry site to monitor electronically before execution of mining.
49. The proponent has to provide insurance protection to the workers in the case of existing mining or provide the affidavit in case of fresh lease before execution of mining lease.
50. The proponent has to display the name board at the quarry site showing the details of Proponent, lease period, extent, etc., with respect to the existing activity before execution of mining.
51. Heavy earth machinery equipments if utilized, after getting approval from the competent authority.
52. The Proponent shall ensure that the project activity including blasting, mining transportation etc should in no way have adverse impact to the other forests, such as reserve forests and social forests, tree plantation and bio diversity, surrounding water bodies etc.
53. The proponent shall provide Green Belt development at the rate of not less than 400 trees/Hectare. The tree saplings shall be not less than 3m height.
54. The fugitive emissions should be monitored during the mining activity and should be reported to TNPCB once in a month and the operation of the quarry should no way impact the agriculture activity & water bodies near the project site.


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55. All the commitment made by the project proponent in the proposal shall be strictly followed.
56. The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.
57. The Project proponent has to strictly comply the outcome/direction of the Hon'ble NGT, Principle Bench, New Delhi in the O.A No.186 of 2016 (M.A.No.350/2016), O.A. No.200/2016, O.A.No.580/2016 (M.A.No.1182/2016), O.A.No.102/2017, O.A.No.404/2016 (M.A.No. 758/2016, M.A. No. 920 /2016, M.A.No.1122/2016, M.A.No. 12/2017 & M.A.No.843/2017), O.A.No.405/2016 and O.A.No.520 of 2016 (M.A.No.981/2016, M.A.No.982/2016 & M.A.No.384/2017).
58. All required sanitary and hygienic measures should be in place before starting construction activities and they have to be maintained throughout the construction phase.
59. The company shall stress upon the preventive aspects of occupational health.
60. A separate environment and safety management cell with qualified staff shall be set up before commissioning of construction activities and shall be retained throughout the lifetime of the industry, for implementation of the stipulated environmental safeguards.
61. A scientific site/ ecological rehabilitation and restoration plan on long term basis should be drawn to carryout restoration with native species and Bio diversity.
62. The Green/Blue plan should guide the restoration of the site. The rehabilitation/restoration plan should be submitted to SEIAA-TN within one month. If applicable.
63. The existing water bodies should not be disturbed to ensure sustainable environment for aquatic life forms.
64. The proponent should completely implement all environmental pollution control measures as detailed in the EIA report and in the additional report.
65. Avenue plantation wherever needed has to be carried out along the route for dust suppression.
66. The green belt developed for the prevention of dust pollution should not form a part of the larger green belt development envisaged in the EIA report.
67. Regular monitoring and check up for pulmonary and carcinogenic diseases to be carried out regularly, not only for the workers involved in the mines but also to the people in the


- villages adjoining the mines. Interaction with the Primary Health Centre & district medical officer should be on regular basis to monitor the incidence of the diseases if any and to provide suitable medical facility for the patients.
68. Monitoring of well water levels and water quality of the wells in the locations furnished in the EIA report shall be done during pre-monsoon and post monsoon period and results submitted to the Regional Office of MoEF, Chennai and SEIAA.
 69. Monitoring of water quality and air quality in and around the project site in the selected monitoring points as mentioned in the EIA report shall be continued regularly involving Academic Institutions.
 70. Hydro geological study including infiltration test shall be conducted by any reputed agency to estimate leachate quantity.
 71. Regular medical check-up for mine workers and nearby residents around the project site involving community medical centre/NIMH shall be conducted.
 72. As per norms, the health study should be conducted through competent/approved health organization and report submitted for one year.
 73. The effective safe guard measures shall be provided to control particulate dust level in critical areas, transfer points and haul road within the mine area.
 74. NOC from the State GWA for drawing ground water shall be obtained, if ground water table is intersected.
 75. Green belt shall be provided as per norms of MoEF & CC, GOI, in consultation with local DFO.
 76. All the recommendations made in the EIA report of the project shall be effectively implemented.
 77. A booklet containing the Dos and Don'ts shall be prepared in vernacular languages for the use of the mine engineers/ managers and the workers to ensure that all necessary environmental, safety and health measures are undertaken.
 78. All the environmental protection measures and safeguards as recommended in the EIA report shall be complied with.
 79. Hydro geological study of the area shall be reviewed annually and report submitted to the Authority. No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the operation of the Mining activity.


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80. A separate Environmental Management Cell equipped with full fledged laboratory facilities to carry out the various Environmental Management and Monitoring functions shall be set up under the control of a Senior Executive.
81. The project proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF at Chennai, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; RSPM, SO₂, NO_x or critical sector parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

Part B: General Conditions:

1. EC is given only on the factual records, documents and the commitment furnished in non judicial stamp paper by the proponent.
2. The Proponent shall obtain the Consent from the TNPC Board before commencing the activity.
3. No change in mining technology and scope of working should be made without prior approval of the SEIAA, Tamil Nadu.
4. No change in the calendar plan including excavation, quantum of mineral (minor mineral) should be made.
5. Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
6. Effective safeguards shall be adopted against health risks on account of breeding of vectors in the water bodies created due to excavation of earth.
7. A berm shall be left from the boundary of adjoining field having a width equal to at least half the depth of proposed excavation.
8. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.


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9. Vehicular emissions shall be kept under control and be regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.
10. Access and haul roads to the quarrying area should be restored in a mutually agreeable manner where these are considered unnecessary after extraction has been completed.
11. All Personnel shall be provided with protective respiratory devices including safety shoes, masks, gloves etc. Supervisory people should be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
12. Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly. The workers shall be provided with personnel protective measures such as masks, gloves, boots etc.
13. Workers/labourers shall be provided with facilities for drinking water and sanitation facility for Female and Male separately.
14. The project proponent shall ensure that child labour is not employed in the project as per the sworn affidavit furnished.
15. The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its Regional Office located at Chennai.
16. The Environmental Clearance does not absolve the applicant/proponent of his obligation/requirement to obtain other statutory and administrative clearances from other statutory and administrative authorities.
17. This Environmental Clearance does not imply that the other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would be considering the project on merits and be taking decisions independently of the Environmental Clearance
18. The SEIAA, Tamil Nadu may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.


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19. The SEIAA, Tamil Nadu may cancel the Environmental Clearance granted to this project under the provisions of EIA Notification, 2006, at any stage of the validity of this Environmental Clearance, if it is found or if it comes to the knowledge of this SEIAA, TN that the project proponent has deliberately concealed and/or submitted false or misleading information or inadequate data for obtaining the Environmental Clearance.
20. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.
21. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability Insurance Act, 1991, along with their amendments, Minor Mineral Conservation & Development Rules, 2010 framed under MMDR Act 1957, National Commission for protection of Child Right Rules, 2006, Wildlife Protection Act, 1972, Forest Conservation Act, 1980, Biodiversity Conservation Act, 2016, the Biological Diversity Act, 2002 and Biological diversity Rules, 2004 and Rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/Hon'ble High Court of Madras and any other Courts of Law relating to the subject matter.
22. Any other conditions stipulated by other Statutory/Government authorities shall be complied.
23. Any appeal against this Environmental Clearance shall lie with the Hon'ble National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
24. The Environmental Clearance is issued based on the documents furnished by the project proponent. In case any documents found to be incorrect/not in order at a later date the Environmental Clearance issued to the project will be deemed to be revoked/ cancelled.


MEMBER SECRETARY
SEIAA-TN

Copy to:

1. The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.

2. The Additional Chief Secretary to Government, Environment and Forests Department, Tamil Nadu.
3. The Additional Chief Secretary to Government, Industries Department, Tamil Nadu.
4. The Additional Principal Chief Conservator of Forests, Regional Office (SZ), 34, HEPC Building, 1st & 2nd Floor, Cathedral Garden Road, Nungambakkam, Chennai - 34.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
6. The Chairman, TNPC Board, 76, Mount Salai, Guindy, Chennai - 32.
7. The District Collector, Krishnagiri District.
8. The Commissioner of Geology and Mines, Guindy, Chennai - 32.
9. EI Division, Ministry of Environment & Forests, Paryavaran Bhawan, New Delhi.
10. Spare.



Signature Not Verified

Digitally signed by Thiru.Deepak S.Bilgi

Member Secretary

Date: 11/8/2022 12:54:14 PM

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TEST REPORT

Report No	EHS360/TR/2022-23/001	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	IS 5182	Sample Drawn by	Laboratory
Sample Name	Air	Sample Code	EHS360/001
Sample Description	Ambient Air Quality Monitoring	Sample Condition	Good
Sampling Location	AAQ 1 – CORE ZONE -12°32'41.10"N 78°12'49.36"E		

Date	Period. hrs	PM10(µg/m3)	PM2.5(µg/m3)	SO2 (µg/m3)	NO2 (µg/m3)	O3 (µg/m3)	NH3 (µg/m3)	CO (mg/ m3)
03.10.2023	7:00-7:00	39.6	18.1	6.2	21.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
04.10.2023	7:15-7:15	40.7	19.5	5.7	19.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
10.10.2023	7:00-7:00	40.8	19.4	7.1	20.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
11.10.2023	7:15-7:15	41.6	19.1	6.4	21.2	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
17.10.2023	7:00-7:00	43.2	19.4	7.4	19.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
18.10.2023	7:15-7:15	39.7	18.6	6.2	21.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
24.10.2023	7:00-7:00	41.8	18.1	6.9	20.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
25.10.2023	7:15-7:15	40.6	19.4	7.1	22.1	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
31.11.2023	7:00-7:00	42.8	18.8	5.7	20.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
01.11.2023	7:15-7:15	40.5	19.4	5.1	21.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
07.11.2023	7:00-7:00	41.7	19.5	6.8	19.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
08.11.2023	7:15-7:15	39.5	18.1	5.7	19.1	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
14.11.2023	7:00-7:00	43.6	19.4	5.9	20.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
15.11.2023	7:15-7:15	41.2	18.8	6.3	21.1	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
21.11.2023	7:00-7:00	39.1	19.3	5.5	22.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
22.11.2023	7:15-7:15	40.4	18.4	7.1	19.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
28.11.2023	7:00-7:00	40.7	17.6	5.4	20.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
29.11.2023	7:15-7:15	40.1	18.5	6.2	19.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
05.12.2023	7:00-7:00	39.8	18.7	5.9	21.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
06.12.2023	7:15-7:15	39.2	19.6	6.1	19.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
12.12.2023	7:00-7:00	40.1	18.0	7.2	20.0	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
13.12.2023	7:15-7:15	41.5	19.8	5.8	21.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
19.12.2023	7:00-7:00	40.8	18.4	5.3	19.3	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
20.12.2023	7:15-7:15	40.1	19.8	6.6	20.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
26.12.2023	7:00-7:00	41.6	18.2	5.4	21.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
27.12.2023	7:15-7:15	39.5	19.9	5.9	20.2	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
NAAQ* Standard		<100	<60	<80	<80	<100	<400	<4

Note: BDL: Below Detection Limit ;DL: Detection Limit

Remarks: The values observed for the pollutants given above are within the CPCB standards.

*****End of Report*****



Verified by

Authorised Signatory

Name: Santhosh Kumar A
Designation: Quality Manager

- Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/001	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	IS 5182	Sample Drawn by	Laboratory
Sample Name	Air	Sample Code	EHS360/001
Sample Description	Ambient Air Quality Monitoring	Sample Condition	Good
Sampling Location	AAQ 1 – CORE ZONE -12°32'41.10"N 78°12'49.36"E		

Date	Period. hrs	SPM ($\mu\text{g}/\text{m}^3$)	As (ng/m^3)	C6H6 ($\mu\text{g}/\text{m}^3$)	BaP (ng/m^3)	Pb ($\mu\text{g}/\text{m}^3$)	Ni (ng/m^3)
03.10.2023	7:00-7:00	63.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
04.10.2023	7:15-7:15	60.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
10.10.2023	7:00-7:00	62.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
11.10.2023	7:15-7:15	60.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
17.10.2023	7:00-7:00	61.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
18.10.2023	7:15-7:15	60.9	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
24.10.2023	7:00-7:00	61.3	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
25.10.2023	7:15-7:15	60.0	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
31.11.2023	7:00-7:00	61.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
01.11.2023	7:15-7:15	61.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
07.11.2023	7:00-7:00	60.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
08.11.2023	7:15-7:15	60.9	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
14.11.2023	7:00-7:00	61.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
15.11.2023	7:15-7:15	60.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
21.11.2023	7:00-7:00	61.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
22.11.2023	7:15-7:15	62.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
28.11.2023	7:00-7:00	61.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
29.11.2023	7:15-7:15	60.3	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
05.12.2023	7:00-7:00	60.1	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
06.12.2023	7:15-7:15	61.5	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
12.12.2023	7:00-7:00	60.3	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
13.12.2023	7:15-7:15	61.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
19.12.2023	7:00-7:00	60.0	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
20.12.2023	7:15-7:15	61.6	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
26.12.2023	7:00-7:00	62.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
27.12.2023	7:15-7:15	61.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
NAAQ* Standard		<200	<100	<60	<80	<80	<100

Note: BDL: Below Detection Limit ;DL: Detection Limit

Remarks: The values observed for the pollutants given above are within the CPCB standards.

*****End of Report*****



Verified by

[Signature]

Authorised Signatory

Name: Santhosh Kumar A
Designation: Quality Manager

- Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/002	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	IS 5182	Sample Drawn by	Laboratory
Sample Name	Air	Sample Code	EHS360/002
Sample Description	Ambient Air Quality Monitoring	Sample Condition	Good
Sampling Location	AAQ 2 – Project Area– 12°32'49.86"N 78°12'45.83"E		

Date	Period. hrs	PM10(µg/m3)	PM2.5(µg/m3)	SO2 (µg/m3)	NO2 (µg/m3)	O3 (µg/m3)	NH3 (µg/m3)	CO (mg/ m3)
03.10.2023	7:00-7:00	40.2	22.9	6.2	21.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
04.10.2023	7:15-7:15	42.3	20.1	5.7	20.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
10.10.2023	7:00-7:00	40.1	21.4	7.1	22.2	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
11.10.2023	7:15-7:15	42.1	23.5	5.1	20.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
17.10.2023	7:00-7:00	41.2	21.1	6.8	21.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
18.10.2023	7:15-7:15	42.3	22.7	6.9	22.1	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
24.10.2023	7:00-7:00	40.1	22.4	5.8	21.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
25.10.2023	7:15-7:15	41.2	20.6	6.3	20.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
31.11.2023	7:00-7:00	43.1	20.4	7.2	21.2	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
01.11.2023	7:15-7:15	40.8	21.9	5.9	20.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
07.11.2023	7:00-7:00	42.2	20.6	5.5	21.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
08.11.2023	7:15-7:15	41.1	19.4	6.1	20.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
14.11.2023	7:00-7:00	42.3	20.6	7.0	19.1	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
15.11.2023	7:15-7:15	40.2	23.8	6.5	19.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
21.11.2023	7:00-7:00	42.3	22.1	5.2	22.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
22.11.2023	7:15-7:15	41.6	21.8	6.7	21.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
28.11.2023	7:00-7:00	43.3	20.3	5.3	21.1	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
29.11.2023	7:15-7:15	40.2	22.5	6.4	22.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
05.12.2023	7:00-7:00	40.8	20.1	6.2	21.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
06.12.2023	7:15-7:15	41.6	21.4	5.8	22.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
12.12.2023	7:00-7:00	42.3	23.9	7.1	21.3	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
13.12.2023	7:15-7:15	43.2	22.2	5.4	22.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
19.12.2023	7:00-7:00	40.6	21.8	6.8	21.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
20.12.2023	7:15-7:15	42.5	20.2	5.2	22.1	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
26.12.2023	7:00-7:00	41.7	22.1	5.9	21.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
27.12.2023	7:15-7:15	43.6	22.8	5.5	22.1	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
NAAQ* Standard		<100	<60	<80	<80	<100	<400	<4

Note: BDL: Below Detection Limit ;DL: Detection Limit

Remarks: The values observed for the pollutants given above are within the CPCB standards.

*****End of Report*****



Verified by



Authorised Signatory

Name: Santhosh Kumar A
Designation: Quality Manager

- Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/002	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	IS 5182	Sample Drawn by	Laboratory
Sample Name	Air	Sample Code	EHS360/002
Sample Description	Ambient Air Quality Monitoring	Sample Condition	Good
Sampling Location	AAQ 2 – Project Area– 12°32'49.86"N 78°12'45.83"E		

Date	Period. hrs	SPM (µg/m ³)	As (ng/m ³)	C6H6 (µg/m ³)	BaP (ng/m ³)	Pb (µg/m ³)	Ni (ng/m ³)
03.10.2023	7:00-7:00	63.6	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
04.10.2023	7:15-7:15	64.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
10.10.2023	7:00-7:00	61.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
11.10.2023	7:15-7:15	62.6	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
17.10.2023	7:00-7:00	63.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
18.10.2023	7:15-7:15	62.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
24.10.2023	7:00-7:00	63.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
25.10.2023	7:15-7:15	61.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
31.11.2023	7:00-7:00	62.9	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
01.11.2023	7:15-7:15	63.3	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
07.11.2023	7:00-7:00	62.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
08.11.2023	7:15-7:15	63.9	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
14.11.2023	7:00-7:00	61.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
15.11.2023	7:15-7:15	62.6	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
21.11.2023	7:00-7:00	63.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
22.11.2023	7:15-7:15	62.5	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
28.11.2023	7:00-7:00	61.3	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
29.11.2023	7:15-7:15	63.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
05.12.2023	7:00-7:00	62.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
06.12.2023	7:15-7:15	62.6	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
12.12.2023	7:00-7:00	61.1	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
13.12.2023	7:15-7:15	63.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
19.12.2023	7:00-7:00	62.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
20.12.2023	7:15-7:15	61.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
26.12.2023	7:00-7:00	62.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
27.12.2023	7:15-7:15	63.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
NAAQ* Standard		<200	<100	<60	<80	<80	<100

Note: BDL: Below Detection Limit ;DL: Detection Limit

Remarks: The values observed for the pollutants given above are within the CPCB standards.

*****End of Report*****



Verified by

[Signature]

Authorised Signatory

[Signature]

Name: Santhosh Kumar A
Designation: Quality Manager

- Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/003	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	IS 5182	Sample Drawn by	Laboratory
Sample Name	Air	Sample Code	EHS360/003
Sample Description	Ambient Air Quality Monitoring	Sample Condition	Good
Sampling Location	AAQ3 – Chinnimalpalli –12°33'17.89"N 78°12'54.04"E		

Date	Period. hrs	PM10(µg/m3)	PM2.5(µg/m3)	SO2 (µg/m3)	NO2 (µg/m3)	O3 (µg/m3)	NH3 (µg/m3)	CO (mg/ m3)
03.10.2023	7:00-7:00	42.7	21.6	8.1	22.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
04.10.2023	7:15-7:15	42.5	20.2	7.6	21.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
10.10.2023	7:00-7:00	43.1	22.5	7.1	19.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
11.10.2023	7:15-7:15	42.8	22.1	8.2	20.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
17.10.2023	7:00-7:00	41.7	20.7	7.5	22.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
18.10.2023	7:15-7:15	43.1	21.6	7.7	21.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
24.10.2023	7:00-7:00	42.7	21.5	8.5	22.2	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
25.10.2023	7:15-7:15	43.5	20.8	8.9	19.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
31.11.2023	7:00-7:00	42.8	20.2	7.6	20.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
01.11.2023	7:15-7:15	42.9	21.3	8.1	19.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
07.11.2023	7:00-7:00	43.4	20.4	7.4	22.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
08.11.2023	7:15-7:15	42.6	21.6	7.2	23.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
14.11.2023	7:00-7:00	41.8	22.7	8.8	22.1	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
15.11.2023	7:15-7:15	42.1	21.5	7.4	19.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
21.11.2023	7:00-7:00	42.9	20.9	7.9	20.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
22.11.2023	7:15-7:15	43.5	20.5	8.5	21.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
28.11.2023	7:00-7:00	43.2	21.7	8.1	22.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
29.11.2023	7:15-7:15	42.8	20.4	7.6	22.1	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
05.12.2023	7:00-7:00	42.7	21.8	7.4	19.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
06.12.2023	7:15-7:15	43.6	21.2	8.5	21.1	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
12.12.2023	7:00-7:00	43.1	20.6	6.2	20.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
13.12.2023	7:15-7:15	42.7	21.8	7.8	22.2	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
19.12.2023	7:00-7:00	42.2	20.2	7.1	19.3	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
20.12.2023	7:15-7:15	41.8	21.6	8.4	20.3	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
26.12.2023	7:00-7:00	43.1	20.5	7.6	21.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
27.12.2023	7:15-7:15	42.5	21.1	7.0	20.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
NAAQ* Standard		<100	<60	<80	<80	<100	<400	<4

Note: BDL: Below Detection Limit ;DL: Detection Limit

Remarks: The values observed for the pollutants given above are within the CPCB standards.

*****End of Report*****

Page 1 of 1

Verified by



Authorised Signatory

Name: Santhosh Kumar A
Designation: Quality Manager

- Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/003	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	IS 5182	Sample Drawn by	Laboratory
Sample Name	Air	Sample Code	EHS360/003
Sample Description	Ambient Air Quality Monitoring	Sample Condition	Good
Sampling Location	AAQ3 – Chinnimalpalli –12°33'17.89"N 78°12'54.04"E		

Date	Period. hrs	SPM (µg/m³)	As (ng/m³)	C6H6 (µg/m³)	BaP (ng/m³)	Pb (µg/m³)	Ni (ng/m³)
03.10.2023	7:00-7:00	67.6	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
04.10.2023	7:15-7:15	65.9	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
10.10.2023	7:00-7:00	64.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
11.10.2023	7:15-7:15	66.3	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
17.10.2023	7:00-7:00	65.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
18.10.2023	7:15-7:15	66.0	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
24.10.2023	7:00-7:00	68.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
25.10.2023	7:15-7:15	66.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
31.11.2023	7:00-7:00	64.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
01.11.2023	7:15-7:15	68.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
07.11.2023	7:00-7:00	65.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
08.11.2023	7:15-7:15	67.6	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
14.11.2023	7:00-7:00	66.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
15.11.2023	7:15-7:15	68.9	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
21.11.2023	7:00-7:00	66.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
22.11.2023	7:15-7:15	68.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
28.11.2023	7:00-7:00	63.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
29.11.2023	7:15-7:15	64.5	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
05.12.2023	7:00-7:00	61.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
06.12.2023	7:15-7:15	67.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
12.12.2023	7:00-7:00	64.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
13.12.2023	7:15-7:15	68.6	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
19.12.2023	7:00-7:00	69.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
20.12.2023	7:15-7:15	63.1	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
26.12.2023	7:00-7:00	62.0	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
27.12.2023	7:15-7:15	63.1	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
NAAQ* Standard		<200	<100	<60	<80	<80	<100

Note: BDL: Below Detection Limit ;DL: Detection Limit

Remarks: The values observed for the pollutants given above are within the CPCB standards.

*****End of Report*****



Verified by

[Signature]

Authorised Signatory

[Signature]

Name: Santhosh Kumar A
Designation: Quality Manager

- Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/004	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	IS 5182	Sample Drawn by	Laboratory
Sample Name	Air	Sample Code	EHS360/004
Sample Description	Ambient Air Quality Monitoring	Sample Condition	Good
Sampling Location	AAQ4 – Billanakuppam – 12°34'53.26"N 78°10'10.90"E		

Date	Period. hrs	PM10(µg/m3)	PM2.5(µg/m3)	SO2 (µg/m3)	NO2 (µg/m3)	O3 (µg/m3)	NH3 (µg/m3)	CO (mg/ m3)
03.10.2023	7:00-7:00	43.7	21.2	7.4	22.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
04.10.2023	7:15-7:15	42.5	20.8	6.5	21.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
10.10.2023	7:00-7:00	43.1	21.5	8.2	23.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
11.10.2023	7:15-7:15	42.8	20.7	8.9	22.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
17.10.2023	7:00-7:00	43.9	20.1	7.5	21.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
18.10.2023	7:15-7:15	42.2	21.6	6.4	20.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
24.10.2023	7:00-7:00	43.7	21.1	8.5	20.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
25.10.2023	7:15-7:15	42.8	20.8	6.2	19.2	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
31.11.2023	7:00-7:00	43.5	20.4	7.8	22.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
01.11.2023	7:15-7:15	42.6	21.8	8.6	20.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
07.11.2023	7:00-7:00	43.5	21.6	8.1	21.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
08.11.2023	7:15-7:15	44.7	20.8	7.8	22.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
14.11.2023	7:00-7:00	43.6	21.4	7.1	21.1	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
15.11.2023	7:15-7:15	42.7	20.4	8.5	22.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
21.11.2023	7:00-7:00	43.0	21.3	6.2	19.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
22.11.2023	7:15-7:15	41.9	21.9	6.4	20.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
28.11.2023	7:00-7:00	44.8	20.8	7.9	21.9	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
29.11.2023	7:15-7:15	42.2	20.4	6.2	22.3	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
05.12.2023	7:00-7:00	43.1	21.3	7.1	20.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
06.12.2023	7:15-7:15	42.6	21.5	8.7	19.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
12.12.2023	7:00-7:00	42.7	20.8	6.8	20.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
13.12.2023	7:15-7:15	41.8	21.7	7.9	22.9	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
19.12.2023	7:00-7:00	42.7	20.6	8.4	21.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
20.12.2023	7:15-7:15	43.6	21.0	6.6	23.1	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
26.12.2023	7:00-7:00	44.8	20.9	7.5	22.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
27.12.2023	7:15-7:15	43.3	21.7	8.6	19.2	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
NAAQ* Standard		<100	<60	<80	<80	<100	<400	<4

Note: BDL: Below Detection Limit ;DL: Detection Limit

Remarks: The values observed for the pollutants given above are within the CPCB standards.

*****End of Report*****



Verified by

Authorised Signatory

Name: Santhosh Kumar A
Designation: Quality Manager

- Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/004	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	IS 5182	Sample Drawn by	Laboratory
Sample Name	Air	Sample Code	EHS360/004
Sample Description	Ambient Air Quality Monitoring	Sample Condition	Good
Sampling Location	AAQ4 – Billanakuppam – 12°34'53.26"N 78°10'10.90"E		

Date	Period. hrs	SPM (µg/m ³)	As (ng/m ³)	C6H6 (µg/m ³)	BaP (ng/m ³)	Pb (µg/m ³)	Ni (ng/m ³)
03.10.2023	7:00-7:00	68.3	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
04.10.2023	7:15-7:15	69.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
10.10.2023	7:00-7:00	65.1	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
11.10.2023	7:15-7:15	66.3	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
17.10.2023	7:00-7:00	64.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
18.10.2023	7:15-7:15	61.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
24.10.2023	7:00-7:00	63.1	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
25.10.2023	7:15-7:15	62.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
31.11.2023	7:00-7:00	66.1	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
01.11.2023	7:15-7:15	61.5	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
07.11.2023	7:00-7:00	65.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
08.11.2023	7:15-7:15	64.0	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
14.11.2023	7:00-7:00	63.6	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
15.11.2023	7:15-7:15	66.3	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
21.11.2023	7:00-7:00	68.1	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
22.11.2023	7:15-7:15	67.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
28.11.2023	7:00-7:00	64.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
29.11.2023	7:15-7:15	68.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
05.12.2023	7:00-7:00	66.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
06.12.2023	7:15-7:15	63.0	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
12.12.2023	7:00-7:00	62.5	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
13.12.2023	7:15-7:15	63.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
19.12.2023	7:00-7:00	65.6	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
20.12.2023	7:15-7:15	67.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
26.12.2023	7:00-7:00	68.9	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
27.12.2023	7:15-7:15	65.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
NAAQ* Standard		<200	<100	<60	<80	<80	<100

Note: BDL: Below Detection Limit ;DL: Detection Limit

Remarks: The values observed for the pollutants given above are within the CPCB standards.

*****End of Report*****



Verified by

[Signature]

Authorised Signatory

[Signature]

Name: Santhosh Kumar A
Designation: Quality Manager

- Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/005	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	IS 5182	Sample Drawn by	Laboratory
Sample Name	Air	Sample Code	EHS360/005
Sample Description	Ambient Air Quality Monitoring	Sample Condition	Good
Sampling Location	AAQ5 – Peddanapalli -12°31'11.06"N 78°14'48.75"E		

Date	Period. hrs	PM10(µg/m3)	PM2.5(µg/m3)	SO2 (µg/m3)	NO2 (µg/m3)	O3 (µg/m3)	NH3 (µg/m3)	CO (mg/ m3)
03.10.2023	7:00-7:00	40.2	20.7	7.2	22.9	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
04.10.2023	7:15-7:15	42.8	21.2	6.1	19.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
10.10.2023	7:00-7:00	40.1	22.6	6.9	20.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
11.10.2023	7:15-7:15	41.7	20.4	7.4	21.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
17.10.2023	7:00-7:00	43.1	22.5	6.8	22.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
18.10.2023	7:15-7:15	40.5	20.7	7.4	19.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
24.10.2023	7:00-7:00	40.8	21.2	6.5	23.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
25.10.2023	7:15-7:15	42.2	22.4	6.1	21.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
31.11.2023	7:00-7:00	40.7	23.8	6.9	20.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
01.11.2023	7:15-7:15	41.6	22.1	7.4	19.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
07.11.2023	7:00-7:00	40.8	21.9	7.9	19.1	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
08.11.2023	7:15-7:15	40.6	20.5	7.1	22.2	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
14.11.2023	7:00-7:00	40.1	20.4	6.8	23.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
15.11.2023	7:15-7:15	42.8	21.7	6.2	21.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
21.11.2023	7:00-7:00	39.2	23.5	7.5	22.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
22.11.2023	7:15-7:15	41.6	22.0	7.4	21.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
28.11.2023	7:00-7:00	43.0	20.7	6.8	20.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
29.11.2023	7:15-7:15	40.7	20.6	6.1	19.9	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
05.12.2023	7:00-7:00	42.8	21.4	7.2	20.1	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
06.12.2023	7:15-7:15	41.1	22.2	6.8	21.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
12.12.2023	7:00-7:00	40.5	20.1	6.3	20.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
13.12.2023	7:15-7:15	42.8	21.7	7.4	19.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
19.12.2023	7:00-7:00	40.2	22.6	6.9	20.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
20.12.2023	7:15-7:15	43.7	20.4	7.1	21.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
26.12.2023	7:00-7:00	40.8	23.8	7.5	22.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
27.12.2023	7:15-7:15	42.7	20.4	6.4	21.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
NAAQ* Standard		<100	<60	<80	<80	<100	<400	<4

Note: BDL: Below Detection Limit ;DL: Detection Limit

Remarks: The values observed for the pollutants given above are within the CPCB standards.

*****End of Report*****

Page 1 of 1

Verified by




Authorised Signatory

Name: Santhosh Kumar A
Designation: Quality Manager

- Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/005	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	IS 5182	Sample Drawn by	Laboratory
Sample Name	Air	Sample Code	EHS360/005
Sample Description	Ambient Air Quality Monitoring	Sample Condition	Good
Sampling Location	AAQ5 – Peddanapalli -12°31'11.06"N 78°14'48.75"E		

Date	Period. hrs	SPM ($\mu\text{g}/\text{m}^3$)	As (ng/m^3)	C6H6 ($\mu\text{g}/\text{m}^3$)	BaP (ng/m^3)	Pb ($\mu\text{g}/\text{m}^3$)	Ni (ng/m^3)
03.10.2023	7:00-7:00	64.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
04.10.2023	7:15-7:15	60.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
10.10.2023	7:00-7:00	65.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
11.10.2023	7:15-7:15	63.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
17.10.2023	7:00-7:00	62.1	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
18.10.2023	7:15-7:15	61.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
24.10.2023	7:00-7:00	63.3	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
25.10.2023	7:15-7:15	62.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
31.11.2023	7:00-7:00	65.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
01.11.2023	7:15-7:15	64.9	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
07.11.2023	7:00-7:00	62.5	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
08.11.2023	7:15-7:15	63.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
14.11.2023	7:00-7:00	62.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
15.11.2023	7:15-7:15	64.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
21.11.2023	7:00-7:00	64.1	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
22.11.2023	7:15-7:15	62.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
28.11.2023	7:00-7:00	63.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
29.11.2023	7:15-7:15	62.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
05.12.2023	7:00-7:00	63.9	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
06.12.2023	7:15-7:15	62.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
12.12.2023	7:00-7:00	64.3	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
13.12.2023	7:15-7:15	63.3	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
19.12.2023	7:00-7:00	62.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
20.12.2023	7:15-7:15	64.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
26.12.2023	7:00-7:00	63.5	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
27.12.2023	7:15-7:15	65.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
NAAQ* Standard		<200	<100	<60	<80	<80	<100

Note: BDL: Below Detection Limit ;DL: Detection Limit

Remarks: The values observed for the pollutants given above are within the CPCB standards.

*****End of Report*****

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[Signature]



Authorised Signatory

Name: Santhosh Kumar A
Designation: Quality Manager

- Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/006	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	IS 5182	Sample Drawn by	Laboratory
Sample Name	Air	Sample Code	EHS360/006
Sample Description	Ambient Air Quality Monitoring	Sample Condition	Good
Sampling Location	AAQ 6 – MC Palli - 12°35'52.76"N 78°15'30.55"E		

Date	Period. hrs	PM10(µg/m3)	PM2.5(µg/m3)	SO2 (µg/m3)	NO2 (µg/m3)	O3 (µg/m3)	NH3 (µg/m3)	CO (mg/ m3)
03.10.2023	7:00-7:00	44.7	19.7	5.4	21.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
04.10.2023	7:15-7:15	42.5	20.1	5.2	20.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
10.10.2023	7:00-7:00	40.6	19.5	6.7	21.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
11.10.2023	7:15-7:15	45.1	19.8	6.9	21.9	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
17.10.2023	7:00-7:00	43.8	20.1	5.8	20.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
18.10.2023	7:15-7:15	42.2	20.6	5.4	21.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
24.10.2023	7:00-7:00	43.7	19.1	7.8	22.1	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
25.10.2023	7:15-7:15	41.9	19.9	6.2	20.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
31.11.2023	7:00-7:00	45.1	20.2	5.5	21.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
01.11.2023	7:15-7:15	42.2	20.8	5.4	22.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
07.11.2023	7:00-7:00	44.7	19.7	6.3	21.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
08.11.2023	7:15-7:15	43.9	19.6	7.5	19.9	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
14.11.2023	7:00-7:00	41.6	20.2	6.6	21.1	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
15.11.2023	7:15-7:15	44.8	20.7	5.2	22.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
21.11.2023	7:00-7:00	45.2	19.8	5.9	21.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
22.11.2023	7:15-7:15	40.7	19.1	4.7	20.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
28.11.2023	7:00-7:00	43.6	20.8	5.2	21.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
29.11.2023	7:15-7:15	42.8	20.9	6.5	20.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
05.12.2023	7:00-7:00	43.5	19.2	6.7	22.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
06.12.2023	7:15-7:15	41.9	20.8	5.6	21.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
12.12.2023	7:00-7:00	40.8	20.4	4.4	22.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
13.12.2023	7:15-7:15	41.7	19.6	4.8	21.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
19.12.2023	7:00-7:00	42.6	19.2	5.8	22.1	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
20.12.2023	7:15-7:15	42.2	20.3	5.2	20.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
26.12.2023	7:00-7:00	41.6	20.8	6.4	21.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
27.12.2023	7:15-7:15	43.5	19.5	6.9	21.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
NAAQ* Standard		<100	<60	<80	<80	<100	<400	<4

Note: BDL: Below Detection Limit ; DL: Detection Limit

Remarks: The values observed for the pollutants given above are within the CPCB standards.

*****End of Report*****

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Verified by



Authorised Signatory

Name: Santhosh Kumar A
Designation: Quality Manager

- Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/006	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	IS 5182	Sample Drawn by	Laboratory
Sample Name	Air	Sample Code	EHS360/006
Sample Description	Ambient Air Quality Monitoring	Sample Condition	Good
Sampling Location	AAQ 6 – MC Palli - 12°35'52.76"N 78°15'30.55"E		

Date	Period. hrs	SPM (µg/m ³)	As (ng/m ³)	C6H6 (µg/m ³)	BaP (ng/m ³)	Pb (µg/m ³)	Ni (ng/m ³)
03.10.2023	7:00-7:00	64.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
04.10.2023	7:15-7:15	63.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
10.10.2023	7:00-7:00	62.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
11.10.2023	7:15-7:15	63.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
17.10.2023	7:00-7:00	65.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
18.10.2023	7:15-7:15	64.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
24.10.2023	7:00-7:00	63.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
25.10.2023	7:15-7:15	63.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
31.11.2023	7:00-7:00	62.5	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
01.11.2023	7:15-7:15	65.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
07.11.2023	7:00-7:00	64.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
08.11.2023	7:15-7:15	62.5	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
14.11.2023	7:00-7:00	63.9	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
15.11.2023	7:15-7:15	62.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
21.11.2023	7:00-7:00	64.5	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
22.11.2023	7:15-7:15	63.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
28.11.2023	7:00-7:00	62.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
29.11.2023	7:15-7:15	62.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
05.12.2023	7:00-7:00	64.6	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
06.12.2023	7:15-7:15	63.5	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
12.12.2023	7:00-7:00	63.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
13.12.2023	7:15-7:15	64.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
19.12.2023	7:00-7:00	62.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
20.12.2023	7:15-7:15	63.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
26.12.2023	7:00-7:00	64.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
27.12.2023	7:15-7:15	62.5	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
NAAQ* Standard		<200	<100	<60	<80	<80	<100

Note: BDL: Below Detection Limit ;DL: Detection Limit

Remarks: The values observed for the pollutants given above are within the CPCB standards.

*****End of Report*****



Verified by

[Signature]

Authorised Signatory

[Signature]

Name: Santhosh Kumar A
Designation: Quality Manager

- Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/007	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	IS 5182	Sample Drawn by	Laboratory
Sample Name	Air	Sample Code	EHS360/007
Sample Description	Ambient Air Quality Monitoring	Sample Condition	Good
Sampling Location	AAQ 7 - Pedattalappalli-12°31'16.87"N 78°11'2.16"E		

Date	Period. hrs	PM10(µg/m3)	PM2.5(µg/m3)	SO2 (µg/m3)	NO2 (µg/m3)	O3 (µg/m3)	NH3 (µg/m3)	CO (mg/ m3)
03.10.2023	7:00-7:00	43.6	20.5	6.2	19.3	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
04.10.2023	7:15-7:15	41.5	19.4	5.4	20.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
10.10.2023	7:00-7:00	42.7	20.1	5.8	22.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
11.10.2023	7:15-7:15	42.0	21.6	5.5	19.1	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
17.10.2023	7:00-7:00	41.8	19.8	6.1	19.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
18.10.2023	7:15-7:15	42.9	18.6	5.3	21.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
24.10.2023	7:00-7:00	43.7	19.9	6.2	20.2	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
25.10.2023	7:15-7:15	41.5	18.2	5.1	19.3	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
31.11.2023	7:00-7:00	44.5	18.1	5.9	22.9	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
01.11.2023	7:15-7:15	41.8	19.4	6.5	23.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
07.11.2023	7:00-7:00	42.1	18.9	5.8	21.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
08.11.2023	7:15-7:15	41.7	19.9	6.4	19.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
14.11.2023	7:00-7:00	43.8	19.4	5.2	23.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
15.11.2023	7:15-7:15	41.6	18.6	6.8	19.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
21.11.2023	7:00-7:00	44.2	19.7	6.6	19.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
22.11.2023	7:15-7:15	43.5	18.0	6.1	23.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
28.11.2023	7:00-7:00	42.6	19.9	7.3	19.8	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
29.11.2023	7:15-7:15	41.9	20.1	5.5	25.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
05.12.2023	7:00-7:00	43.8	19.1	5.9	19.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
06.12.2023	7:15-7:15	44.2	20.6	6.6	23.4	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
12.12.2023	7:00-7:00	42.6	18.7	5.9	19.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
13.12.2023	7:15-7:15	44.7	17.2	6.1	22.2	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
19.12.2023	7:00-7:00	42.8	18.8	5.6	19.9	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
20.12.2023	7:15-7:15	43.6	19.4	5.4	21.7	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
26.12.2023	7:00-7:00	44.3	18.6	6.2	22.5	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
27.12.2023	7:15-7:15	42.1	18.5	6.4	19.6	BDL(DL:5.0)	BDL(DL:1.0)	BDL(DL:1.14)
NAAQ* Standard		<100	<60	<80	<80	<100	<400	<4

Note: BDL: Below Detection Limit ;DL: Detection Limit
Remarks: The values observed for the pollutants given above are within the CPCB standards.

*****End of Report*****



Verified by

Authorised Signatory

Name: Santhosh Kumar A
 Designation: Quality Manager

Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report.
 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client.
 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/007	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	IS 5182	Sample Drawn by	Laboratory
Sample Name	Air	Sample Code	EHS360/007
Sample Description	Ambient Air Quality Monitoring	Sample Condition	Good
Sampling Location	AAQ 7 - Pedattalapalli-12°31'16.87"N 78°11'2.16"E		

Date	Period. hrs	SPM ($\mu\text{g}/\text{m}^3$)	As (ng/m^3)	C6H6 ($\mu\text{g}/\text{m}^3$)	BaP (ng/m^3)	Pb ($\mu\text{g}/\text{m}^3$)	Ni (ng/m^3)
03.10.2023	7:00-7:00	63.1	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
04.10.2023	7:15-7:15	62.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
10.10.2023	7:00-7:00	64.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
11.10.2023	7:15-7:15	63.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
17.10.2023	7:00-7:00	62.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
18.10.2023	7:15-7:15	63.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
24.10.2023	7:00-7:00	62.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
25.10.2023	7:15-7:15	62.1	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
31.11.2023	7:00-7:00	63.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
01.11.2023	7:15-7:15	64.6	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
07.11.2023	7:00-7:00	62.9	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
08.11.2023	7:15-7:15	63.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
14.11.2023	7:00-7:00	62.3	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
15.11.2023	7:15-7:15	63.9	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
21.11.2023	7:00-7:00	64.5	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
22.11.2023	7:15-7:15	63.9	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
28.11.2023	7:00-7:00	62.5	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
29.11.2023	7:15-7:15	63.4	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
05.12.2023	7:00-7:00	62.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
06.12.2023	7:15-7:15	63.9	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
12.12.2023	7:00-7:00	62.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
13.12.2023	7:15-7:15	64.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
19.12.2023	7:00-7:00	63.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
20.12.2023	7:15-7:15	62.7	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
26.12.2023	7:00-7:00	63.8	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
27.12.2023	7:15-7:15	64.2	BDL (DL:0.1)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:0.1)	BDL (DL:0.1)
NAAQ* Standard		<200	<100	<60	<80	<80	<100

Note: BDL: Below Detection Limit ;DL: Detection Limit

Remarks: The values observed for the pollutants given above are within the CPCB standards.

*****End of Report*****

Page 1 of 1

Verified by

[Signature]



Authorised Signatory

Name: Santhosh Kumar A
Designation: Quality Manager

- Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/ 009	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	IS 9989	Sample Drawn by	Laboratory
Sample Name	Noise Level Monitoring	Sample Code	EHS360/ 009
Sample Description	Ambient Noise	Sample Collected Date	26.12.2023

Location	N1 – Core Zone - 12°32'41.19"N 78°12'50.32"E			N2 -Core Zone - 12°32'49.88"N 78°12'46.54"E			
	Parameter	Min	Max	Result	Min	Max	Result
Time	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
06:00-07:00	38.4	41.2	40.0	38.4	41.2	40.0	
07:00-08:00	35.6	39.6	38.0	35.6	39.6	38.0	
08:00-09:00	34.6	38.7	37.1	34.6	38.7	37.1	
09:00-10:00	39.8	42.6	41.4	37.5	42.6	40.8	
10:00-11:00	36.6	40.8	39.2	36.6	40.8	39.2	
11:00-12:00	34.7	39.7	37.9	34.7	39.7	37.9	
12:00-13:00	39.8	44.4	42.7	36.4	41.6	39.7	
13:00-14:00	40.1	45.2	43.4	38.4	45.2	43.0	
14:00-15:00	39.7	43.6	42.1	34.7	39.2	37.5	
15:00-16:00	35.4	39.5	37.9	35.4	39.5	37.9	
16:00-17:00	38.6	43.7	41.9	38.6	42.3	40.8	
17:00-18:00	41.6	45.8	44.2	38.2	45.8	43.5	
18:00-19:00	40.4	45.8	43.9	37.9	45.7	43.4	
19:00-20:00	43.2	48.5	46.6	40.2	48.5	46.1	
20:00-21:00	41.5	47.1	45.1	38.5	42.5	40.9	
21:00-22:00	40.8	44.6	43.1	39.7	43.2	41.8	
22:00-23:00	39.8	42.8	41.6	35.7	39.8	38.2	
23:00-00:00	31.6	35.2	33.8	33.2	38.7	36.8	
00:00-01:00	32.9	36.6	35.1	32.9	36.6	35.1	
01:00-02:00	31.4	36.2	34.4	31.4	36.2	34.4	
02:00-03:00	33.9	38.2	36.6	33.9	38.2	36.6	
03:00-04:00	32.3	36.7	35.0	32.3	36.7	35.0	
04:00-05:00	30.7	35.1	33.4	30.7	35.1	33.4	
05:00-06:00	31.8	36.4	34.7	31.8	36.4	34.7	
Result	Day Means		41.5	Day Means		40.3	
	Night Means		34.7	Night Means		35.1	
Note: CPCB Norms Industrial Area Day Time:75 dB(A); Night Time:70 dB(A) The Noise level in the above location exists within the permissible limits of CPCB.							

Verified by



Authorised Signatory

Name: Santhosh Kumar A
Designation: Quality Manager

Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/ 010	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	IS 9989	Sample Drawn by	Laboratory
Sample Name	Noise Level Monitoring	Sample Code	EHS360/ 010
Sample Description	Ambient Noise	Sample Collected Date	26.12.2023

Location	N3 – Orappam- 10°49'59.38"N 76°59'41.08"E			N4 – Ikondamkothapalli -10°46'46.01"N 77° 2'9.90"E		
Parameter	Min	Max	Result	Min	Max	Result
Time	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
06:00-07:00	39.5	45.2	43.2	37.4	42.2	40.4
07:00-08:00	36.6	42.2	40.2	36.6	41.8	39.9
08:00-09:00	37.4	43	41.0	37.4	43	41.0
09:00-10:00	37.5	42.6	40.8	37.5	42.6	40.8
10:00-11:00	36.6	41.6	39.8	36.6	41.6	39.8
11:00-12:00	39.4	44.8	42.9	35.2	41.5	39.4
12:00-13:00	36.4	41.2	39.4	36.4	41.2	39.4
13:00-14:00	38.4	45.2	43.0	38.4	45.2	43.0
14:00-15:00	40.2	45.7	43.8	39.5	44.6	42.8
15:00-16:00	39.7	45.1	43.2	37.5	41.2	39.7
16:00-17:00	40.5	45.7	43.8	40.5	45.7	43.8
17:00-18:00	41.6	46.8	44.9	38.4	42.8	41.1
18:00-19:00	37.9	42.8	41.0	37.9	42.8	41.0
19:00-20:00	40.2	45.7	43.8	36.4	41.2	39.4
20:00-21:00	38.5	43.7	41.8	38.5	43.7	41.8
21:00-22:00	39.7	44.9	43.0	39.7	44.9	43.0
22:00-23:00	38.8	44.5	42.5	38.8	44.5	42.5
23:00-00:00	30.4	35.2	33.4	30.4	35.2	33.4
00:00-01:00	29.5	34.5	32.7	32.7	37.6	35.8
01:00-02:00	31.4	36.2	34.4	31.4	36.2	34.4
02:00-03:00	28.2	32.6	30.9	33.4	39.4	37.4
03:00-04:00	31.5	36.7	34.8	31.5	36.7	34.8
04:00-05:00	30.7	35.1	33.4	30.7	35.1	33.4
05:00-06:00	29.8	34.5	32.8	33.3	39.1	37.1
Result	Day Means		42.3	Day Means		41.1
	Night Means		33.2	Night Means		35.2

Note: CPCB Norms Industrial Area Day Time:75 dB(A); Night Time:70 dB(A)
The Noise level in the above location exists within the permissible limits of CPCB.

Verified by



Authorised Signatory

Name: Santhosh Kumar A
Designation: Quality Manager

Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/ 011	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	IS 9989	Sample Drawn by	Laboratory
Sample Name	Noise Level Monitoring	Sample Code	EHS360/ 011
Sample Description	Ambient Noise	Sample Collected Date	26.12.2023

Location	N5 Kanagamuthu - 12°29'25.28"N78°14'16.78"E			N6 – Naikkanoor- 12°28'32.90"N 78°17'21.88"E		
Parameter	Min	Max	Result	Min	Max	Result
Time	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
06:00-07:00	37.4	42.1	40.4	35.2	41.1	39.1
07:00-08:00	36.6	41.8	39.9	36.6	41.8	39.9
08:00-09:00	37.4	42.5	40.7	37.4	42.5	40.7
09:00-10:00	37.5	41.1	39.7	35.6	41.1	39.2
10:00-11:00	36.6	41.6	39.8	36.6	41.6	39.8
11:00-12:00	35.2	40.8	38.8	35.2	40.8	38.8
12:00-13:00	36.4	41.2	39.4	36.4	41.2	39.4
13:00-14:00	38.4	44.4	42.4	34.7	40.2	38.3
14:00-15:00	39.5	44.6	42.8	38.7	42.9	41.3
15:00-16:00	37.5	41.2	39.7	37.5	41.2	39.7
16:00-17:00	38.7	45.7	43.5	36.2	40.6	38.9
17:00-18:00	37.2	42.8	40.8	37.2	42.8	40.8
18:00-19:00	34.2	39.5	37.6	34.2	39.5	37.6
19:00-20:00	36.4	41.2	39.4	36.4	41.2	39.4
20:00-21:00	38.5	43.7	41.8	36.8	41.2	39.5
21:00-22:00	35.2	41.1	39.1	35.2	41.1	39.1
22:00-23:00	38.8	44.5	42.5	31.3	36.7	34.8
23:00-00:00	30.4	35.2	33.4	30.4	35.2	33.4
00:00-01:00	29.5	34.4	32.6	29.5	34.4	32.6
01:00-02:00	31.4	36.2	34.4	31.4	36.2	34.4
02:00-03:00	30.8	35.4	33.7	30.8	35.4	33.7
03:00-04:00	31.5	36.7	34.8	31.5	36.7	34.8
04:00-05:00	30.7	35.1	33.4	30.7	35.1	33.4
05:00-06:00	33.3	39.1	37.1	33.3	39.1	37.1
Result	Day Means		40.5	Day Means		39.2
	Night Means		34.2	Night Means		34.2

Note: CPCB Norms Industrial Area Day Time:75 dB(A); Night Time:70 dB(A)
The Noise level in the above location exists within the permissible limits of CPCB.

Verified by



Authorised Signatory

Name: Santhosh Kumar A
Designation: Quality Manager

- Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/ 012	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	IS 9989	Sample Drawn by	Laboratory
Sample Name	Noise Level Monitoring	Sample Code	EHS360/ 012
Sample Description	Ambient Noise	Sample Collected Date	26.12.2023

Location		N7 - Nagamangalam- 12°30'24.09"N 78°20'8.53"E		
Parameter	Min	Max	Result	
Time	dB(A)	dB(A)	dB(A)	
06:00-07:00	35.2	41.1	39.1	
07:00-08:00	33.8	39.6	37.6	
08:00-09:00	37.4	42.5	40.7	
09:00-10:00	32.5	37.6	35.8	
10:00-11:00	36.6	41.6	39.8	
11:00-12:00	33.9	38.2	36.6	
12:00-13:00	36.4	41.2	39.4	
13:00-14:00	34.7	40.2	38.3	
14:00-15:00	37.6	41.6	40.0	
15:00-16:00	35.8	41.2	39.3	
16:00-17:00	36.2	40.6	38.9	
17:00-18:00	32.4	37.7	35.8	
18:00-19:00	34.2	39.5	37.6	
19:00-20:00	36.4	41.2	39.4	
20:00-21:00	36.8	41.2	39.5	
21:00-22:00	35.2	41.1	39.1	
22:00-23:00	31.3	36.7	34.8	
23:00-00:00	30.4	35.2	33.4	
00:00-01:00	33.7	39.1	37.2	
01:00-02:00	31.4	36.2	34.4	
02:00-03:00	30.8	35.4	33.7	
03:00-04:00	29.9	35.2	33.3	
04:00-05:00	30.7	35.1	33.4	
05:00-06:00	32.7	37.6	35.8	
Result	Day Means		38.3	
	Night Means		34.5	

Note: CPCB Norms Industrial Area Day Time:75 dB(A); Night Time:70 dB(A)
The Noise level in the above location exists within the permissible limits of CPCB.

Verified by



Authorised Signatory

Name: Santhosh Kumar A
Designation: Quality Manager

Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/ 013	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Soil	Sample Code	EHS360/ 013
Sample Description	Soil 1	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 KG	Sample Received On	27.12.2023
Sample Condition	Good	Test Commenced On	28.12.2023
Sampling Location	Soil – 1 – Core Zone -12°29'2.11"N 78°17'36.60"E		

S. No	Test Parameters	Protocols	Results
01	pH @ 25°C	IS 2720 Part 26 - 1987 (Reaff:2016)	8.71
02	Conductivity @ 25°C	IS 14767 - 2000 (Reaff : 2016)	400 µmhos/cm
03	Water Holding Capacity	By Gravimetric Method	45.4 %
04	Bulk Density	By Cylindrical Method	1.05 g/cm ³
05	Porosity	By Gravimetric Method	42.8 %
06	Calcium as Ca	Food and Agriculture organization of the united Nation Rome 2007 : 2018 APHA 23 rd Edn 2019 4500 Cl B IS 2720 Part 27 : 1977 (Reaff:2015) IS 10158 : 1982 (Reaff: 2019)	97.4 mg/kg
07	Magnesium as Mg		55.5 mg/kg
08	Chloride as Cl		110 mg/kg
09	Soluble Sulphate as SO ₄		0.015 %
10	Total Phosphorus as P		2.7 mg/kg
11	Total Nitrogen as N	IS 14684 : 1999 (Reaff:2019)	352.7 mg/kg
12	Organic Matter	IS : 2720 Part 22: 1972 (Reaff: 2015)	1.71 %
13	Organic Carbon	IS : 2720 Part 22: 1972 (Reaff: 2015)	0.99 %

*****End of Report*****

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Name : Santhosh Kumar A
Designation : Quality Manager

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TEST REPORT

Report No	EHS360/TR/2022-23/ 013	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Soil	Sample Code	EHS360/ 013
Sample Description	Soil 1	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 KG	Sample Received On	27.12.2023
Sample Condition	Good	Test Commenced On	28.12.2023
Sampling Location	Soil – 1 – Core Zone -12°29'2.11"N 78°17'36.60"E		

S. No	Test Parameters	Protocols	Results
14	Texture :		
	Clay	Gravimetric Method	33.7 %
	Sand		31.1 %
	Silt		35.2 %
15	Manganese as Mn	USEPA 3050 B – 1996 & USEPA 6010 C - 2000	21 mg/kg
16	Zinc as Zn		1.09 mg/kg
17	Boron as B		3.9 mg/kg
18	Potassium as K		30.5 mg/kg
19	Cadmium as Cd		BDL (DL : 1.0 mg/kg)
20	Total Chromium as Cr		BDL (DL : 1.0 mg/kg)
21	Copper as Cu		BDL (DL : 1.0 mg/kg)
22	Lead as Pb		0.97 mg/kg
23	Iron as Fe		1.77 mg/kg
24	Cation Exchange Capacity		USEPA 9080 – 1986

*****End of Report*****

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Name : Santhosh Kumar A
Designation : Quality Manager

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TEST REPORT

Report No	EHS360/TR/2022-23/ 014	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Soil	Sample Code	EHS360/ 014
Sample Description	Soil 2	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 KG	Sample Received On	27.12.2023
Sample Condition	Good	Test Commenced On	28.12.2023
Sampling Location	Soil – 2 -Core Zone -12°32'49.96"N 78°12'47.70"E		

S. No	Test Parameters	Protocols	Results
01	pH @ 25°C	IS 2720 Part 26 - 1987 (Reaff:2016)	8.29
02	Conductivity @ 25°C	IS 14767 - 2000 (Reaff : 2016)	515 µmhos/cm
03	Water Holding Capacity	By Gravimetric Method	45.8 %
04	Bulk Density	By Cylindrical Method	1.11 g/cm ³
05	Porosity	By Gravimetric Method	44.1 %
06	Calcium as Ca	Food and Agriculture organization of the united Nation Rome 2007 : 2018 APHA 23 rd Edn 2019 4500 Cl B IS 2720 Part 27 : 1977 (Reaff:2015) IS 10158 : 1982 (Reaff: 2019)	122 mg/kg
07	Magnesium as Mg		70.4 mg/kg
08	Chloride as Cl		87.9 mg/kg
09	Soluble Sulphate as SO ₄		0.0018 %
10	Total Phosphorus as P		1.7 mg/kg
11	Total Nitrogen as N	IS 14684 : 1999 (Reaff:2019)	300.2 mg/kg
12	Organic Matter	IS : 2720 Part 22: 1972 (Reaff: 2015)	1.33 %
13	Organic Carbon	IS : 2720 Part 22: 1972 (Reaff: 2015)	0.77 %

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Name : Santhosh Kumar A
Designation : Quality Manager

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TEST REPORT

Report No	EHS360/TR/2022-23/ 014	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Soil	Sample Code	EHS360/ 014
Sample Description	Soil 2	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 KG	Sample Received On	27.12.2023
Sample Condition	Good	Test Commenced On	28.12.2023
Sampling Location	Soil – 2 -Core Zone -12°32'49.96"N 78°12'47.70"E		

S. No	Test Parameters	Protocols	Results
14	Texture :		
	Clay		34.2 %
	Sand		31.9 %
	Silt		33.9 %
15	Manganese as Mn		31.8 mg/kg
16	Zinc as Zn		2.9 mg/kg
17	Boron as B		2.2 mg/kg
18	Potassium as K		36 mg/kg
19	Cadmium as Cd	USEPA 3050 B – 1996 & USEPA 6010 C - 2000	BDL (DL : 1.0 mg/kg)
20	Total Chromium as Cr		BDL (DL : 1.0 mg/kg)
21	Copper as Cu		BDL (DL : 1.0 mg/kg)
22	Lead as Pb		0.55 mg/kg
23	Iron as Fe		1.37 mg/kg
24	Cation Exchange Capacity	USEPA 9080 – 1986	37.1 meq/100g of soil

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Name : Santhosh Kumar A
Designation : Quality Manager

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TEST REPORT

Report No	EHS360/TR/2022-23/ 015	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Soil	Sample Code	EHS360/ 015
Sample Description	Soil 3	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 KG	Sample Received On	27.12.2023
Sample Condition	Good	Test Commenced On	28.12.2023
Sampling Location	Soil – 3 –Chinimalpalli- 12°33'15.92"N 78°12'56.84"E		

S. No	Test Parameters	Protocols	Results
01	pH @ 25°C	IS 2720 Part 26 - 1987 (Reaff:2016)	8.05
02	Conductivity @ 25°C	IS 14767 - 2000 (Reaff : 2016)	500 µmhos/cm
03	Water Holding Capacity	By Gravimetric Method	46.6 %
04	Bulk Density	By Cylindrical Method	1.14 g/cm ³
05	Porosity	By Gravimetric Method	45.7 %
06	Calcium as Ca	Food and Agriculture organization of the united Nation Rome 2007 : 2018 APHA 23 rd Edn 2019 4500 Cl B IS 2720 Part 27 : 1977 (Reaff:2015) IS 10158 : 1982 (Reaff: 2019)	92.7 mg/kg
07	Magnesium as Mg		75.4 mg/kg
08	Chloride as Cl		128.1 mg/kg
09	Soluble Sulphate as SO ₄		0.0019 %
10	Total Phosphorus as P		1.8 mg/kg
11	Total Nitrogen as N	IS 14684 : 1999 (Reaff:2019)	370.8 mg/kg
12	Organic Matter	IS : 2720 Part 22: 1972 (Reaff: 2015)	2.10 %
13	Organic Carbon	IS : 2720 Part 22: 1972 (Reaff: 2015)	1.22 %

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Name : Santhosh Kumar A
Designation : Quality Manager

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TEST REPORT

Report No	EHS360/TR/2022-23/ 015	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Soil	Sample Code	EHS360/ 015
Sample Description	Soil 3	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 KG	Sample Received On	27.12.2023
Sample Condition	Good	Test Commenced On	28.12.2023
Sampling Location	Soil – 3 –Chinimalpalli- 12°33'15.92"N 78°12'56.84"E		

S.No	Test Parameters	Protocols	Results
14	Texture :		
	Clay	Gravimetric Method	31.9 %
	Sand		33.3 %
	Silt		34.8 %
15	Manganese as Mn	USEPA 3050 B – 1996 & USEPA 6010 C - 2000	24.6 mg/kg
16	Zinc as Zn		1.29 mg/kg
17	Boron as B		2.18 mg/kg
18	Potassium as K		32.7 mg/kg
19	Cadmium as Cd		BDL (DL : 1.0 mg/kg)
20	Total Chromium as Cr		BDL (DL : 1.0 mg/kg)
21	Copper as Cu		BDL (DL : 1.0 mg/kg)
22	Lead as Pb		0.89 mg/kg
23	Iron as Fe		1.19 mg/kg
24	Cation Exchange Capacity		USEPA 9080 – 1986

*****End of Report*****



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Name : Santhosh Kumar A
Designation : Quality Manager

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TEST REPORT

Report No	EHS360/TR/2022-23/ 016	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Soil	Sample Code	EHS360/ 016
Sample Description	Soil 4	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 KG	Sample Received On	27.12.2023
Sample Condition	Good	Test Commenced On	28.12.2023
Sampling Location	Soil – 4 -Bilanakuppam-12°34'52.98"N 78°10'11.08"E		

S.No	Test Parameters	Protocols	Results
01	pH @ 25°C	IS 2720 Part 26 - 1987 (Reaff:2016)	8.41
02	Conductivity @ 25°C	IS 14767 - 2000 (Reaff : 2016)	421 µmhos/cm
03	Water Holding Capacity	By Gravimetric Method	46.1. %
04	Bulk Density	By Cylindrical Method	1.10 g/cm ³
05	Porosity	By Gravimetric Method	45.03 %
06	Calcium as Ca	Food and Agriculture organization of the united Nation Rome 2007 : 2018 APHA 23 rd Edn 2019 4500 Cl B IS 2720 Part 27 : 1977 (Reaff:2015) IS 10158 : 1982 (Reaff: 2019)	155 mg/kg
07	Magnesium as Mg		70.5 mg/kg
08	Chloride as Cl		66.7 mg/kg
09	Soluble Sulphate as SO ₄		0.0069 %
10	Total Phosphorus as P		2.86 mg/kg
11	Total Nitrogen as N	IS 14684 : 1999 (Reaff:2019)	381.7 mg/kg
12	Organic Matter	IS : 2720 Part 22: 1972 (Reaff: 2015)	2.36 %
13	Organic Carbon	IS : 2720 Part 22: 1972 (Reaff: 2015)	1.37 %

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Name : Santhosh Kumar A
Designation : Quality Manager

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TEST REPORT

Report No	EHS360/TR/2022-23/ 016	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Soil	Sample Code	EHS360/ 016
Sample Description	Soil 4	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 KG	Sample Received On	27.12.2023
Sample Condition	Good	Test Commenced On	28.12.2023
Sampling Location	Soil – 4 -Bilanakuppam-12°34'52.98"N 78°10'11.08"E		

S.No	Test Parameters	Protocols	Results
14	Texture :		
	Clay	Gravimetric Method	35.5 %
	Sand		29.8 %
	Silt		34.7 %
15	Manganese as Mn	USEPA 3050 B – 1996 & USEPA 6010 C - 2000	25.5 mg/kg
16	Zinc as Zn		1.48 mg/kg
17	Boron as B		1.9 mg/kg
18	Potassium as K		49.7 mg/kg
19	Cadmium as Cd		BDL (DL : 1.0 mg/kg)
20	Total Chromium as Cr		BDL (DL : 1.0 mg/kg)
21	Copper as Cu		BDL (DL : 1.0 mg/kg)
22	Lead as Pb		0.88 mg/kg
23	Iron as Fe		2.76 mg/kg
24	Cation Exchange Capacity		USEPA 9080 – 1986

*****End of Report*****



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Name : Santhosh Kumar A
Designation : Quality Manager

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TEST REPORT

Report No	EHS360/TR/2022-23/ 017	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Soil	Sample Code	EHS360/ 017
Sample Description	Soil 5	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 KG	Sample Received On	27.12.2023
Sample Condition	Good	Test Commenced On	28.12.2023
Sampling Location	Soil – 5 – Peddanapalli - 12°31'11.44"N 78°14'48.70"E		

S.No	Test Parameters	Protocols	Results
01	pH @ 25°C	IS 2720 Part 26 - 1987 (Reaff:2016)	7.59
02	Conductivity @ 25°C	IS 14767 - 2000 (Reaff : 2016)	477 µmhos/cm
03	Water Holding Capacity	By Gravimetric Method	48.7 %
04	Bulk Density	By Cylindrical Method	0.98 g/cm ³
05	Porosity	By Gravimetric Method	46.1 %
06	Calcium as Ca	Food and Agriculture organization of the united Nation Rome 2007 : 2018 APHA 23 rd Edn 2019 4500 Cl B IS 2720 Part 27 : 1977 (Reaff:2015) IS 10158 : 1982 (Reaff: 2019)	101.5 mg/kg
07	Magnesium as Mg		76.2 mg/kg
08	Chloride as Cl		88.1 mg/kg
09	Soluble Sulphate as SO ₄		0.0019 %
10	Total Phosphorus as P		2.13 mg/kg
11	Total Nitrogen as N	IS 14684 : 1999 (Reaff:2019)	322.4 mg/kg
12	Organic Matter	IS : 2720 Part 22: 1972 (Reaff: 2015)	2.79 %
13	Organic Carbon	IS : 2720 Part 22: 1972 (Reaff: 2015)	1.62 %

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Name : Santhosh Kumar A
Designation : Quality Manager

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TEST REPORT

Report No	EHS360/TR/2022-23/ 017	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Soil	Sample Code	EHS360/ 017
Sample Description	Soil 2	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 KG	Sample Received On	27.12.2023
Sample Condition	Good	Test Commenced On	28.12.2023
Sampling Location	Soil – 5 – Peddanapalli - 12°31'11.44"N 78°14'48.70"E		

S.No	Test Parameters	Protocols	Results
14	Texture :		
	Clay	Gravimetric Method	33.9 %
	Sand		30.3 %
	Silt		35.8 %
15	Manganese as Mn	USEPA 3050 B – 1996 & USEPA 6010 C – 2000	25.3 mg/kg
16	Zinc as Zn		1.57 mg/kg
17	Boron as B		1.8 mg/kg
18	Potassium as K		32 mg/kg
19	Cadmium as Cd		BDL (DL : 1.0 mg/kg)
20	Total Chromium as Cr		BDL (DL : 1.0 mg/kg)
21	Copper as Cu		BDL (DL : 1.0 mg/kg)
22	Lead as Pb		0.81 mg/kg
23	Iron as Fe		2.57 mg/kg
24	Cation Exchange Capacity		USEPA 9080 – 1986

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A. S. A.

Name : Santhosh Kumar A
Designation : Quality Manager

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TEST REPORT

Report No	EHS360/TR/2022-23/ 018	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Soil	Sample Code	EHS360/ 018
Sample Description	Soil 6	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 KG	Sample Received On	27.12.2023
Sample Condition	Good	Test Commenced On	28.12.2023
Sampling Location	Soil – 6 – MC Palli -12°35'53.43"N 78°15'30.30"E		

S.No	Test Parameters	Protocols	Results
01	pH @ 25°C	IS 2720 Part 26 - 1987 (Reaff:2016)	8.09
02	Conductivity @ 25°C	IS 14767 - 2000 (Reaff : 2016)	425 µmhos/cm
03	Water Holding Capacity	By Gravimetric Method	46.7 %
04	Bulk Density	By Cylindrical Method	0.96 g/cm ³
05	Porosity	By Gravimetric Method	45.4 %
06	Calcium as Ca	Food and Agriculture organization of the united Nation Rome 2007 : 2018 APHA 23 rd Edn 2019 4500 Cl B IS 2720 Part 27 : 1977 (Reaff:2015) IS 10158 : 1982 (Reaff: 2019)	131.7 mg/kg
07	Magnesium as Mg		70.8 mg/kg
08	Chloride as Cl		68.5 mg/kg
09	Soluble Sulphate as SO ₄		0.0015 %
10	Total Phosphorus as P		4.1 mg/kg
11	Total Nitrogen as N	IS 14684 : 1999 (Reaff:2019)	377.4 mg/kg
12	Organic Matter	IS : 2720 Part 22: 1972 (Reaff: 2015)	2.24 %
13	Organic Carbon	IS : 2720 Part 22: 1972 (Reaff: 2015)	1.30 %

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Name : Santhosh Kumar A
Designation : Quality Manager

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TEST REPORT

Report No	EHS360/TR/2022-23/ 018	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Soil	Sample Code	EHS360/ 018
Sample Description	Soil 6	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 KG	Sample Received On	27.12.2023
Sample Condition	Good	Test Commenced On	28.12.2023
Sampling Location	Soil – 6 – MC Palli -12°35'53.43"N 78°15'30.30"E		

S.No	Test Parameters	Protocols	Results
14	Texture :		
	Clay	Gravimetric Method	32.7 %
	Sand		31.5 %
	Silt		35.8 %
15	Manganese as Mn	USEPA 3050 B – 1996 & USEPA 6010 C – 2000	22.5 mg/kg
16	Zinc as Zn		1.64 mg/kg
17	Boron as B		1.44 mg/kg
18	Potassium as K		30.1 mg/kg
19	Cadmium as Cd		BDL (DL : 1.0 mg/kg)
20	Total Chromium as Cr		BDL (DL : 1.0 mg/kg)
21	Copper as Cu		BDL (DL : 1.0 mg/kg)
22	Lead as Pb		0.86 mg/kg
23	Iron as Fe		2.47 mg/kg
24	Cation Exchange Capacity		USEPA 9080 – 1986

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Name : Santhosh Kumar A
Designation : Quality Manager

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TEST REPORT

Report No	EHS360/TR/2022-23/ 019	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Water	Sample Code	EHS360/019
Sample Description	Surface Water (SW-1)	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 Litres	Sample Received On	27.12.2023
Sample Condition	Fit for Analysis	Test Commenced On	28.12.2023
Sampling Location	Badatalav Eri- 12°32'46.24"N 78°14'29.32"E		

S.No.	Parameters	Test Method	RESULTS
Discipline: Chemical			
1	Colour	IS 3025 Part 4:1983	5 Hazen
2	Odour	IS 3025 Part 5:2018	Agreeable
3	pH at 25°C	IS 3025 Part 11:1983	7.73
4	Conductivity @ 25°C	IS 3025 Part 14:2013	855 µmhos/cm
5	Turbidity	IS 3025 Part 10:1984	4.0 NTU
6	Total Dissolved Solids	IS 3025 Part 16:1984	504 mg/l
7	Total Hardness as CaCO ₃	IS 3025 Part 21:2009	181.05 mg/l
8	Calcium as Ca	IS 3025 Part 40:1991	31.2 mg/l
9	Magnesium as Mg	IS 3025 Part 46:1994	25.1 mg/l
10	Total Alkalinity as CaCO ₃	IS 3025 Part 23:1986	141.6 mg/l
11	Chloride as Cl	IS 3025 Part 32:1988	118 mg/l
12	Sulphate as SO ₄	IS 3025 Part 24:1986	67.4 mg/l
13	Iron as Fe	IS 3025 Part 53:2003	0.26 mg/l
14	Residual Free Chlorine	IS 3025 Part 26:1986	BDL (DL:0.1 mg/l)
15	Fluoride as F	APHA 23 rd Edn. 2017:4500 F,D	0.21 mg/l
16	Nitrate as NO ₃	IS 3025 Part 34:1988	6.6 mg/l

*****End of Report*****



Verified by



Authorised Signatory

Name: Santhosh Kumar A
Designation: Quality Manager

Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/019	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Water	Sample Code	EHS360/019
Sample Description	Surface Water (SW-1)	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 Litres	Sample Received On	27.12.2023
Sample Condition	Fit for Analysis	Test Commenced On	28.12.2023
Sampling Location	Badatalav Eri- 12°32'46.24"N 78°14'29.32"E		

S.No.	Parameters	Test Method	RESULTS
17	Copper as Cu	IS 3025 Part 65:2014	BDL (DL:0.01 mg/l)
18	Manganese as Mn	IS 3025 Part 65:2014	BDL (DL:0.02 mg/l)
19	Mercury as Hg	USEPA 200.8	BDL (DL:0.0005 mg/l)
20	Cadmium as Cd	IS 3025 Part 65:2014	BDL (DL:0.001 mg/l)
21	Selenium as Se	IS 3025 Part 65:2014	BDL (DL:0.005 mg/l)
22	Aluminium as Al	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
23	Lead as Pb	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
24	Zinc as Zn	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
25	Total Chromium as Cr	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.02 mg/l)
26	Boron as B	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
27	Mineral Oil	IS 3025 Part 39-1991 (Reaff. 2019)	BDL(DL : 0.01 mg/l)
28	Phenolic compounds as C ₆ H ₅ OH	IS 3025 Part 43-1992(Reaff: 2019)	BDL (DL:0.0005 mg/l)
29	Anionic Detergents (as MBAS)	IS 13428 – 2005 (Reaff:2019) (Annex K)	BDL (DL:0.01 mg/l)
30	Cyanide as CN	IS 3025 Part 27-1986 (Reaff. 2019)	BDL (DL:0.01 mg/l)
31	BOD @ 27°C for 3 days	IS 3025 Part 44:1993 (Reaff:2019)	8.9 mg/l
32	Chemical Oxygen Demand	IS 3025 Part 58:2006 (Reaff:2017)	44 mg/l
33	Dissolved Oxygen	IS 3025 Part 38:1989 (Reaff:2019)	5.2 mg/l
34	Barium as Ba	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL:0.05 mg/l)
35	Ammonia (as total ammonia-N)	IS 3025 Part 34-1988 (Reaff. 2019)	2.1 mg/l
36	Sulphide as H ₂ S	IS 3025 Part 29-1986 (Reaff: 2019)	BDL (DL:0.01 mg/l)
37	Molybdenum as Mo	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)
38	Total Arsenic as As	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
39	Total Suspended Solids	IS 3025 Part 17 -1984 (Reaff:2017)	18.7 mg/l
	Discipline: Biological	Group: Water	
40	Total Coliform	APHA 23 rd Edn. 2017:9221B	650 MPN/100ml
41	<i>Escherichia coli</i>	APHA 23 rd Edn. 2017:9221F	120 MPN/100ml

*****End of Report*****



Verified by

Authorised Signatory

Name : Santhosh Kumar A.
Designation : Quality Manager

Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/ 020	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Water	Sample Code	EHS360/020
Sample Description	Surface Water (SW-2)	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 Litres	Sample Received On	27.12.2023
Sample Condition	Fit for Analysis	Test Commenced On	28.12.2023
Sampling Location	Ponnaiyar River-12°31'57.85"N 78° 8'28.48"E		

S.No.	Parameters	Test Method	RESULTS
	Discipline: Chemical		
1	Colour	IS 3025 Part 4:1983	5 Hazen
2	Odour	IS 3025 Part 5:2018	Agreeable
3	pH at 25°C	IS 3025 Part 11:1983	7.55
4	Conductivity @ 25°C	IS 3025 Part 14:2013	718 µmhos/cm
5	Turbidity	IS 3025 Part 10:1984	2.1 NTU
6	Total Dissolved Solids	IS 3025 Part 16:1984	423 mg/l
7	Total Hardness as CaCO ₃	IS 3025 Part 21:2009	156.66 mg/l
8	Calcium as Ca	IS 3025 Part 40:1991	26.7 mg/l
9	Magnesium as Mg	IS 3025 Part 46:1994	21.9 mg/l
10	Total Alkalinity as CaCO ₃	IS 3025 Part 23:1986	130 mg/l
11	Chloride as Cl	IS 3025 Part 32:1988	93.8 mg/l
12	Sulphate as SO ₄	IS 3025 Part 24:1986	51.1 mg/l
13	Iron as Fe	IS 3025 Part 53:2003	0.24 mg/l
14	Residual Free Chlorine	IS 3025 Part 26:1986	BDL (DL:0.1 mg/l)
15	Fluoride as F	APHA 23 rd Edn. 2017:4500 F,D	0.26 mg/l
16	Nitrate as NO ₃	IS 3025 Part 34:1988	6.4 mg/l

*****End of Report*****



Verified by



Authorised Signatory

Name: Santhosh Kumar A
Designation: Quality Manager

Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/ 020	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Water	Sample Code	EHS360/020
Sample Description	Surface Water (SW-2)	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 Litres	Sample Received On	27.12.2023
Sample Condition	Fit for Analysis	Test Commenced On	28.12.2023
Sampling Location	Ponnaiyar River-12°31'57.85"N 78° 8'28.48"E		

S.No.	Parameters	Test Method	RESULTS
17	Copper as Cu	IS 3025 Part 65:2014	BDL (DL:0.01 mg/l)
18	Manganese as Mn	IS 3025 Part 65:2014	BDL (DL:0.02 mg/l)
19	Mercury as Hg	USEPA 200.8	BDL (DL:0.0005 mg/l)
20	Cadmium as Cd	IS 3025 Part 65:2014	BDL (DL:0.001 mg/l)
21	Selenium as Se	IS 3025 Part 65:2014	BDL (DL:0.005 mg/l)
22	Aluminium as Al	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
23	Lead as Pb	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
24	Zinc as Zn	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
25	Total Chromium as Cr	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.02 mg/l)
26	Boron as B	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
27	Mineral Oil	IS 3025 Part 39-1991 (Reaff. 2019)	BDL(DL : 0.01 mg/l)
28	Phenolic compounds as C ₆ H ₅ OH	IS 3025 Part 43-1992(Reaff: 2019)	BDL (DL:0.0005 mg/l)
29	Anionic Detergents (as MBAS)	IS 13428 – 2005 (Reaff:2019) (Annex K)	BDL (DL:0.01 mg/l)
30	Cyanide as CN	IS 3025 Part 27-1986 (Reaff. 2019)	BDL (DL:0.01 mg/l)
31	BOD @ 27°C for 3 days	IS 3025 Part 44:1993 (Reaff:2019)	6.6 mg/l
32	Chemical Oxygen Demand	IS 3025 Part 58:2006 (Reaff:2017)	32 mg/l
33	Dissolved Oxygen	IS 3025 Part 38:1989 (Reaff:2019)	5.7 mg/l
34	Barium as Ba	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL:0.05 mg/l)
35	Ammonia (as total ammonia-N)	IS 3025 Part 34-1988 (Reaff. 2019)	1.7 mg/l
36	Sulphide as H ₂ S	IS 3025 Part 29-1986 (Reaff: 2019)	BDL (DL:0.01 mg/l)
37	Molybdenum as Mo	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)
38	Total Arsenic as As	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
39	Total Suspended Solids	IS 3025 Part 17 -1984 (Reaff:2017)	18.7 mg/l
	Discipline: Biological	Group: Water	
40	Total Coliform	APHA 23 rd Edn. 2017:9221B	600 MPN/100ml
41	<i>Escherichia coli</i>	APHA 23 rd Edn. 2017:9221F	80 MPN/100ml

*****End of Report*****



Verified by

Authorised Signatory

 Name: Santhosh Kumar A
 Designation : Quality Manager

Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/ 021	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Water	Sample Code	EHS360/021
Sample Description	Ground Water (WW-1)	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 Litres	Sample Received On	27.12.2023
Sample Condition	Fit for Analysis	Test Commenced On	28.12.2023
Sampling Location	Chinimalpalli -12°33'18.83"N 78°12'38.14"E		

S.No.	Parameters	Test Method	RESULTS
Discipline: Chemical			
1	Colour	IS 3025 Part 4:1983 (Reaff:2017)	5
2	Odour	IS 3025 Part 5:2018	Agreeable
3	pH at 25°C	IS 3025 Part 11:1983 (Reaff:2017)	7.01
4	Conductivity @ 25°C	IS 3025 Part 14:2013 (Reaff:2019)	680 µmhos/cm
5	Turbidity	IS 3025 Part 10:1984 (Reaff:2017)	1.1 NTU
6	Total Dissolved Solids	IS 3025 Part 16:1984 (Reaff:2017)	401 mg/l
7	Total Hardness as CaCO ₃	IS 3025 Part 21:2009 (Reaff:2019)	145.62 mg/l
8	Calcium as Ca	IS 3025 Part 40:1991 (Reaff:2019)	25.9 mg/l
9	Magnesium as Mg	IS 3025 Part 46:1994 (Reaff:2019)	19.7 mg/l
10	Total Alkalinity as CaCO ₃	IS 3025 Part 23:1986 (Reaff:2019)	112 mg/l
11	Chloride as Cl	IS 3025 Part 32:1988 (Reaff:2019)	76.5 mg/l
12	Sulphate as SO ₄	IS 3025 Part 24:1986 (Reaff:2019)	47 mg/l
13	Iron as Fe	IS 3025 Part 53:2003 (Reaff:2019)	0.35 mg/l
14	Residual Free Chlorine	IS 3025 Part 26:1986 (Reaff:2019)	BDL (DL:0.1 mg/l)
15	Fluoride as F	APHA 23 rd Edn. 2017:4500 F,D	0.15 mg/l
16	Nitrate as NO ₃	IS 3025 Part 34:1988 (Reaff:2019)	5.5 mg/l

*****End of Report*****

Page 1 of 1

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Authorised Signatory



Name: Santhosh Kumar A
Designation: Quality Manager

Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/ 021	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Water	Sample Code	EHS360/021
Sample Description	Ground Water (WW-1)	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 Litres	Sample Received On	27.12.2023
Sample Condition	Fit for Analysis	Test Commenced On	28.12.2023
Sampling Location	Chinimalpalli -12°33'18.83"N 78°12'38.14"E		

S.No.	Parameters	Test Method	RESULTS
17	Copper as Cu	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.01 mg/l)
18	Manganese as Mn	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)
19	Mercury as Hg	USEPA 200.8	BDL (DL:0.0005 mg/l)
20	Cadmium as Cd	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.001 mg/l)
21	Selenium as Se	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
22	Aluminium as Al	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
23	Lead as Pb	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
24	Zinc as Zn	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
25	Total Chromium as Cr	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.02 mg/l)
26	Boron as B	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
27	Mineral Oil	IS 3025 Part 39-1991 (Reaff. 2019)	BDL(DL : 0.01 mg/l)
28	Phenolic compounds as C ₆ H ₅ OH	IS 3025 Part 43-1992(Reaff: 2019)	BDL (DL:0.0005 mg/l)
29	Anionic Detergents (as MBAS)	IS 13428 – 2005 (Reaff:2019) (Annex K)	BDL (DL:0.01 mg/l)
30	Cyanide as CN	IS 3025 Part 27-1986 (Reaff. 2019)	BDL (DL:0.01 mg/l)
31	Barium as Ba	IS 3025 Part 44:1993 (Reaff:2019)	BDL(DL:0.05 mg/l)
32	Ammonia (as total ammonia-N)	IS 3025 Part 58:2006 (Reaff:2017)	BDL (DL:0.01 mg/l)
33	Sulphide as H ₂ S	IS 3025 Part 38:1989 (Reaff:2019)	BDL (DL:0.01 mg/l)
34	Molybdenum as Mo	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)
35	Total Arsenic as As	IS 3025 Part 34-1988 (Reaff. 2019)	BDL (DL:0.005 mg/l)
36	Total Suspended Solids	IS 3025 Part 29-1986 (Reaff: 2019)	BDL (DL:1.0 mg/l)
	Discipline: Biological	Group: Water	
37	Total Coliform	APHA 23 rd Edn. 2017:9221B	170 MPN/100ml
38	<i>Escherichia coli</i>	APHA 23 rd Edn. 2017:9221F	< 1.8 MPN/100ml

*****End of Report*****

Page 1 of 1

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Authorised Signatory

 Name: Santhosh Kumar A
 Designation: Quality Manager

Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/ 022	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Water	Sample Code	EHS360/022
Sample Description	Ground Water (WW-2)	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 Litres	Sample Received On	27.12.2023
Sample Condition	Fit for Analysis	Test Commenced On	28.12.2023
Sampling Location	Peddanapalli- 12°31'14.65"N 78°14'51.37"E		

S.No.	Parameters	Test Method	RESULTS
	Discipline: Chemical		
1	Colour	IS 3025 Part 4:1983 (Reaff:2017)	5
2	Odour	IS 3025 Part 5:2018	Agreeable
3	pH at 25°C	IS 3025 Part 11:1983 (Reaff:2017)	7.97
4	Conductivity @ 25°C	IS 3025 Part 14:2013 (Reaff:2019)	969 µmhos/cm
5	Turbidity	IS 3025 Part 10:1984 (Reaff:2017)	1.5 NTU
6	Total Dissolved Solids	IS 3025 Part 16:1984 (Reaff:2017)	572 mg/l
7	Total Hardness as CaCO ₃	IS 3025 Part 21:2009 (Reaff:2019)	184.44 mg/l
8	Calcium as Ca	IS 3025 Part 40:1991 (Reaff:2019)	31.9 mg/l
9	Magnesium as Mg	IS 3025 Part 46:1994 (Reaff:2019)	25.5 mg/l
10	Total Alkalinity as CaCO ₃	IS 3025 Part 23:1986 (Reaff:2019)	170 mg/l
11	Chloride as Cl	IS 3025 Part 32:1988 (Reaff:2019)	122.1 mg/l
12	Sulphate as SO ₄	IS 3025 Part 24:1986 (Reaff:2019)	81 mg/l
13	Iron as Fe	IS 3025 Part 53:2003 (Reaff:2019)	0.18 mg/l
14	Residual Free Chlorine	IS 3025 Part 26:1986 (Reaff:2019)	BDL (DL:0.1 mg/l)
15	Fluoride as F	APHA 23 rd Edn. 2017:4500 F,D	0.19 mg/l
16	Nitrate as NO ₃	IS 3025 Part 34:1988 (Reaff:2019)	5.1 mg/l

*****End of Report*****

Page 1 of 1

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Authorised Signatory

Name: Santhosh Kumar A
Designation: Quality Manager

Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/ 022	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Water	Sample Code	EHS360/022
Sample Description	Ground Water (WW-2)	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 Litres	Sample Received On	27.12.2023
Sample Condition	Fit for Analysis	Test Commenced On	28.12.2023
Sampling Location	Peddanapalli- 12°31'14.65"N 78°14'51.37"E		

S.No.	Parameters	Test Method	RESULTS
17	Copper as Cu	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.01 mg/l)
18	Manganese as Mn	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)
19	Mercury as Hg	USEPA 200.8	BDL (DL:0.0005 mg/l)
20	Cadmium as Cd	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.001 mg/l)
21	Selenium as Se	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
22	Aluminium as Al	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
23	Lead as Pb	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
24	Zinc as Zn	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
25	Total Chromium as Cr	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.02 mg/l)
26	Boron as B	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
27	Mineral Oil	IS 3025 Part 39-1991 (Reaff. 2019)	BDL(DL : 0.01 mg/l)
28	Phenolic compounds as C ₆ H ₅ OH	IS 3025 Part 43-1992(Reaff: 2019)	BDL (DL:0.0005 mg/l)
29	Anionic Detergents (as MBAS)	IS 13428 – 2005 (Reaff:2019) (Annex K)	BDL (DL:0.01 mg/l)
30	Cyanide as CN	IS 3025 Part 27-1986 (Reaff. 2019)	BDL (DL:0.01 mg/l)
31	Barium as Ba	IS 3025 Part 44:1993 (Reaff:2019)	BDL(DL:0.05 mg/l)
32	Ammonia (as total ammonia-N)	IS 3025 Part 58:2006 (Reaff:2017)	BDL (DL:0.01 mg/l)
33	Sulphide as H ₂ S	IS 3025 Part 38:1989 (Reaff:2019)	BDL (DL:0.01 mg/l)
34	Molybdenum as Mo	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)
35	Total Arsenic as As	IS 3025 Part 34-1988 (Reaff. 2019)	BDL (DL:0.005 mg/l)
36	Total Suspended Solids	IS 3025 Part 29-1986 (Reaff: 2019)	BDL (DL:1.0 mg/l)
	Discipline: Biological	Group: Water	
37	Total Coliform	APHA 23 rd Edn. 2017:9221B	100 MPN/100ml
38	<i>Escherichia coli</i>	APHA 23 rd Edn. 2017:9221F	< 1.8 MPN/100ml


*****End of Report*****

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Authorised Signatory


 Name : Santhosh Kumar A
 Designation : Quality Manager

Note: 1. The test results are only to the sample submitted for test. 2. Any correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstance's lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report.

TEST REPORT

Report No	EHS360/TR/2022-23/ 023	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Water	Sample Code	EHS360/023
Sample Description	Ground Water (BW-1)	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 Litres	Sample Received On	27.12.2023
Sample Condition	Fit for Analysis	Test Commenced On	28.12.2023
Sampling Location	Near Project Area - 12°32'34.75"N 78°12'24.61"E		

S.No.	Parameters	Test Method	RESULTS
Discipline: Chemical			
1	Colour	IS 3025 Part 4:1983 (Reaff:2017)	5
2	Odour	IS 3025 Part 5:2018	Agreeable
3	pH at 25°C	IS 3025 Part 11:1983 (Reaff:2017)	7.09
4	Conductivity @ 25°C	IS 3025 Part 14:2013 (Reaff:2019)	815 µmhos/cm
5	Turbidity	IS 3025 Part 10:1984 (Reaff:2017)	1.2 NTU
6	Total Dissolved Solids	IS 3025 Part 16:1984 (Reaff:2017)	480 mg/l
7	Total Hardness as CaCO ₃	IS 3025 Part 21:2009 (Reaff:2019)	161.77 mg/l
8	Calcium as Ca	IS 3025 Part 40:1991 (Reaff:2019)	27.1 mg/l
9	Magnesium as Mg	IS 3025 Part 46:1994 (Reaff:2019)	22.9 mg/l
10	Total Alkalinity as CaCO ₃	IS 3025 Part 23:1986 (Reaff:2019)	161 mg/l
11	Chloride as Cl	IS 3025 Part 32:1988 (Reaff:2019)	97.5 mg/l
12	Sulphate as SO ₄	IS 3025 Part 24:1986 (Reaff:2019)	68.2 mg/l
13	Iron as Fe	IS 3025 Part 53:2003 (Reaff:2019)	0.41 mg/l
14	Residual Free Chlorine	IS 3025 Part 26:1986 (Reaff:2019)	BDL (DL:0.1 mg/l)
15	Fluoride as F	APHA 23 rd Edn. 2017:4500 F,D	0.38 mg/l
16	Nitrate as NO ₃	IS 3025 Part 34:1988 (Reaff:2019)	5.1 mg/l

*****End of Report*****

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Verified by



Authorised Signatory

Name : Santhosh Kumar A
Designation : Quality Manager

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TEST REPORT

Report No	EHS360/TR/2022-23/ 023	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Water	Sample Code	EHS360/023
Sample Description	Ground Water (BW-1)	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 Litres	Sample Received On	27.12.2023
Sample Condition	Fit for Analysis	Test Commenced On	28.12.2023
Sampling Location	Near Project Area - 12°32'34.75"N 78°12'24.61"E		

S.No.	Parameters	Test Method	RESULTS
17	Copper as Cu	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.01 mg/l)
18	Manganese as Mn	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)
19	Mercury as Hg	USEPA 200.8	BDL (DL:0.0005 mg/l)
20	Cadmium as Cd	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.001 mg/l)
21	Selenium as Se	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
22	Aluminium as Al	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
23	Lead as Pb	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
24	Zinc as Zn	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
25	Total Chromium as Cr	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.02 mg/l)
26	Boron as B	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
27	Mineral Oil	IS 3025 Part 39-1991 (Reaff. 2019)	BDL(DL : 0.01 mg/l)
28	Phenolic compounds as C ₆ H ₅ OH	IS 3025 Part 43-1992(Reaff: 2019)	BDL (DL:0.0005 mg/l)
29	Anionic Detergents (as MBAS)	IS 13428 – 2005 (Reaff:2019) (Annex K)	BDL (DL:0.01 mg/l)
30	Cyanide as CN	IS 3025 Part 27-1986 (Reaff. 2019)	BDL (DL:0.01 mg/l)
31	Barium as Ba	IS 3025 Part 44:1993 (Reaff:2019)	BDL(DL:0.05 mg/l)
32	Ammonia (as total ammonia-N)	IS 3025 Part 58:2006 (Reaff:2017)	BDL (DL:0.01 mg/l)
33	Sulphide as H ₂ S	IS 3025 Part 38:1989 (Reaff:2019)	BDL (DL:0.01 mg/l)
34	Molybdenum as Mo	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)
35	Total Arsenic as As	IS 3025 Part 34-1988 (Reaff. 2019)	BDL (DL:0.005 mg/l)
36	Total Suspended Solids	IS 3025 Part 29-1986 (Reaff: 2019)	BDL (DL:1.0 mg/l)
	Discipline: Biological	Group: Water	
37	Total Coliform	APHA 23 rd Edn. 2017:9221B	129 MPN/100ml
38	<i>Escherichia coli</i>	APHA 23 rd Edn. 2017:9221F	< 1.8 MPN/100ml


*****End of Report*****

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Authorised Signatory


 Name : Santhosh Kumar A
 Designation : Quality Manager

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TEST REPORT

Report No	EHS360/TR/2022-23/ 024	Report Date	05.01.2024
Site Location	THIRU. D. LOGANATHAN GREY GRANITE QUAR S.F.Nos. 356/1B1, 356/2, 356/3B and 360/2 of Chendarapalli Village, Bargur (formerly Krishnagiri) Taluk, Krishnagiri District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Water	Sample Code	EHS360/024
Sample Description	Ground Water (BW-2)	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 Litres	Sample Received On	27.12.2023
Sample Condition	Fit for Analysis	Test Commenced On	28.12.2023
Sampling Location	MC Palli - 12°35'51.29"N 78°15'31.80"E		

S.No.	Parameters	Test Method	RESULTS
	Discipline: Chemical		
1	Colour	IS 3025 Part 4:1983 (Reaff:2017)	5
2	Odour	IS 3025 Part 5:2018	Agreeable
3	pH at 25°C	IS 3025 Part 11:1983 (Reaff:2017)	7.83
4	Conductivity @ 25°C	IS 3025 Part 14:2013 (Reaff:2019)	897 µmhos/cm
5	Turbidity	IS 3025 Part 10:1984 (Reaff:2017)	1.2 NTU
6	Total Dissolved Solids	IS 3025 Part 16:1984 (Reaff:2017)	529 mg/l
7	Total Hardness as CaCO ₃	IS 3025 Part 21:2009 (Reaff:2019)	194.24 mg/l
8	Calcium as Ca	IS 3025 Part 40:1991 (Reaff:2019)	32.7 mg/l
9	Magnesium as Mg	IS 3025 Part 46:1994 (Reaff:2019)	27.4 mg/l
10	Total Alkalinity as CaCO ₃	IS 3025 Part 23:1986 (Reaff:2019)	163 mg/l
11	Chloride as Cl	IS 3025 Part 32:1988 (Reaff:2019)	110 mg/l
12	Sulphate as SO ₄	IS 3025 Part 24:1986 (Reaff:2019)	51.4 mg/l
13	Iron as Fe	IS 3025 Part 53:2003 (Reaff:2019)	0.17 mg/l
14	Residual Free Chlorine	IS 3025 Part 26:1986 (Reaff:2019)	BDL (DL:0.1 mg/l)
15	Fluoride as F	APHA 23 rd Edn. 2017:4500 F,D	0.15 mg/l
16	Nitrate as NO ₃	IS 3025 Part 34:1988 (Reaff:2019)	4.1 mg/l

*****End of Report*****



Verified by



Authorised Signatory

Name: Santhosh Kumar A
Designation: Quality Manager

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TEST REPORT

Report No	EHS360/TR/2022-23/ 024	Report Date	05.01.2024
Site Location	M/S.KOTHAPETTA ROUGH STONE AND GRAVEL QUARRIES S.F.Nos. 78/1B(P) ,78/1A (Part) & 78/1B (P) of Kothapetta Village, Krishnagiri Taluk & District		
Sampling Method	SOP Method	Sample Drawn by	Laboratory
Sample Name	Water	Sample Code	EHS360/024
Sample Description	Ground Water (BW-2)	Sample Collected Date	26.12.2023
Qty. of Sample Received	2 Litres	Sample Received On	27.12.2023
Sample Condition	Fit for Analysis	Test Commenced On	28.12.2023
Sampling Location	MC Palli - 12°35'51.29"N 78°15'31.80"E		

S.No.	Parameters	Test Method	RESULTS
17	Copper as Cu	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.01 mg/l)
18	Manganese as Mn	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)
19	Mercury as Hg	USEPA 200.8	BDL (DL:0.0005 mg/l)
20	Cadmium as Cd	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.001 mg/l)
21	Selenium as Se	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
22	Aluminium as Al	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
23	Lead as Pb	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
24	Zinc as Zn	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
25	Total Chromium as Cr	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.02 mg/l)
26	Boron as B	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
27	Mineral Oil	IS 3025 Part 39-1991 (Reaff. 2019)	BDL(DL : 0.01 mg/l)
28	Phenolic compounds as C ₆ H ₅ OH	IS 3025 Part 43-1992(Reaff: 2019)	BDL (DL:0.0005 mg/l)
29	Anionic Detergents (as MBAS)	IS 13428 – 2005 (Reaff:2019) (Annex K)	BDL (DL:0.01 mg/l)
30	Cyanide as CN	IS 3025 Part 27-1986 (Reaff. 2019)	BDL (DL:0.01 mg/l)
31	Barium as Ba	IS 3025 Part 44:1993 (Reaff:2019)	BDL(DL:0.05 mg/l)
32	Ammonia (as total ammonia-N)	IS 3025 Part 58:2006 (Reaff:2017)	BDL (DL:0.01 mg/l)
33	Sulphide as H ₂ S	IS 3025 Part 38:1989 (Reaff:2019)	BDL (DL:0.01 mg/l)
34	Molybdenum as Mo	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)
35	Total Arsenic as As	IS 3025 Part 34-1988 (Reaff. 2019)	BDL (DL:0.005 mg/l)
36	Total Suspended Solids	IS 3025 Part 29-1986 (Reaff: 2019)	BDL (DL:1.0 mg/l)
	Discipline: Biological	Group: Water	
37	Total Coliform	APHA 23 rd Edn. 2017:9221B	160 MPN/100ml
38	<i>Escherichia coli</i>	APHA 23 rd Edn. 2017:9221F	< 1.8 MPN/100ml

*****End of Report*****

Page 1 of 1

Verified by

[Signature]



Authorised Signatory

[Signature]
Name: Santhosh Kumar A
Designation: Quality Manager

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National Accreditation Board for Education and Training



Certificate of Accreditation

Geo Exploration & Mining Solutions, Salem

No. 17, Advaita Ashram Road, Fairlands, Salem – 636 004, Tamilnadu, India.

The organization is accredited as **Category-A** under the QCI-NABET Scheme for Accreditation of EIA Consultant Organization, Version 3: for preparing EIA-EMP reports in the following Sectors –

S.No	Sector Description	Sector (as per)		Cat.
		NABET	MoEFCC	
1	Mining of minerals opencast only	1	1 (a) (i)	A
2	Industrial estates/ parks/ complexes/areas, export processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes	31	7 (c)	B
3	Building and construction projects	38	8(a)	B

Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in RAAC minutes dated Jan 06, 2023 and posted on QCI-NABET website.

The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no QCI/NABET/ENV/ACO/23/2684 dated Feb 20, 2023. The accreditation needs to be renewed before the expiry date by Geo Exploration & Mining Solutions, Salem following due process of assessment.

Sr. Director, NABET
Dated: Feb 20, 2023

Certificate No.
NABET/EIA/2225/RA 0276

Valid up to
August 06, 2025

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